Medical Research Council of Canada
Conseil de recherches médicales du Canada

Report of the President

1990–1991

Canada

The Medical Research Council wishes to thank all the researchers who provided photographs. Because of space limitations, not all of them could be used.

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August 30, 1991

The Honourable Benoît Bouchard, P.C., M.P.
Minister of National Health and Welfare
Ottawa, Ontario
K1A 0K9

Sir:

In accordance with the requirements of the Medical Research Council Act, I have the honour to present to you herewith the Report of the President of the Medical Research Council for the fiscal year 1990–91.

Yours sincerely,

David Hawkins

David Hawkins, M.D.
Vice-President

TABLE OF CONTENTS

The President's Statement 7

The Medical Research Council of Canada 9

Program Grants 12

University of Alberta 13
University of British Columbia 14
University of Calgary 18
Dalhousie University 19
McGill University 20
McMaster University 22
Université de Montréal 23
Université du Québec 29
Queen's University 30
University of Saskatchewan 31
University of Toronto 32
University of Western Ontario 36

Organization Chart 37

The Membership of Council, 1990–91 38

Standing Committees of Council 40

MRC Secretariat 42

MRC Publications 42

Tables:

Number of Grants and Awards, 1989–90 & 1990–91 43
Expenditures by University and MRC Program, 1990–91 44
Expenditures by MRC Program, 1988–89 to 1990–91 and by Category of Support, 1990–91 46
Distribution of MRC Expenditures by Province, 1987–88 to 1990–91 47
Operating Grants by Research Area 48

Auditor's Report 49

Peer-Review Committees 55

THE PRESIDENT'S STATEMENT

This year's Report focuses on MRC's Collaborative Research Programs. Through these programs, Council has over the past 15 years given priority to the support of teams of researchers. In the following pages you will find examples of how they are enabling advances to be made in a wide variety of fields.

Collaborative Research Programs include two major rubrics — Medical Research Council Groups, covered in the 1987–88 Report of the President, and Program Grants — which differ mainly in size: MRC Groups provide for larger teams and larger grants (up to $1.5 million a year), and include salaries, which Program Grants do not. A Program Grant may be considered a small Group without salary support.

The Collaborative Research Programs were instituted during the 1970s in response to an expressed need: how to provide support through a single grant application for teams of researchers with common interests in laboratories within the same institution or in different geographic locations. The stimulus came from researchers at the University of Manitoba in Winnipeg who wished to collaborate with a group at Queen's University in Kingston, Ontario. Neither team was large enough to apply for a Group grant, but Council approved the application because it saw the need for such a mechanism.

After that the program grew, until in 1990–91 a total of 40 Program Grants, totalling $11.8 million, and 13 Group Grants, totalling $14 million, were underway. Throughout this period, although the numbers and amounts of grants in the Collaborative Research Programs have grown, the proportion of its budget that Council has allocated has remained at about 15 per cent. Thus, the amount of funding for these programs has increased only because MRC's total budget has grown from $50.8 million in 1976 to $215.5 million in 1990.

In this respect, Council has been fortunate. Since 1982, with the exception of one year, 1986, its overall budget has enjoyed some real increase despite the cumulative cost of inflation.

Program Grants combining teams in different universities did not develop as had been hoped. The researchers involved were individually successful, and the reason for collaboration remained, but in the end they found they preferred to work within their own grants. The need for constant travel caused practical difficulties: although much can be accomplished today with electronic aids such as electronic mail and fax, when it comes to making some research decisions, researchers must talk to each other face to face. And long distance travel was not only expensive but time-consuming and fatiguing.

As a result, the Program Grants have evolved. It has been found that for practical purposes in the day-to-day laboratory work, administrative aspects are more workable with an association of teams than with a fusion of teams.

Despite the formative difficulties, the Program Grants have been, and remain, both flexible and successful. They have been shown to be an excellent tool for the promotion of multidisciplinary or interdisciplinary approaches. And because of the growing popularity of these approaches they have provided an excellent milieu for the training of graduate students.

As mentioned above, this year's Report highlights articles on some of Council's Program Grants and the challenging research being carried out by grantees.

This statement is my last as President of MRC. The past 10 years in this position have been most rewarding, personally and professionally. I wish to express my deepest gratitude to the many individuals who so generously and unselfishly provided their energies and expertise to Council during my term in office.

Pierre Bois, M.D., Ph.D.*

*Dr. Bois retired as President of MRC on June 2, 1991.

THE MEDICAL RESEARCH COUNCIL OF CANADA

Established by Parliament in 1969, the Medical Research Council of Canada (MRC) is a federal agency which promotes, assists and undertakes basic, applied and clinical research in Canada in the health sciences. MRC also acts as advisor on health research to the Minister of National Health and Welfare, through whom it reports to Parliament.

The Council's full-time President is also the chief executive officer. Twenty-one other members, representing the scientific and lay community, serve without remuneration and, like the President, are appointed by the Governor-in-Council. The Council's membership also includes three associate members who represent the other federal granting agencies and the Department of National Health and Welfare.

The Executive Committee, of at least six other Council members besides the President and the Vice-President, carries out executive powers and functions under delegation from the Council.

Standing committees assist in formulating policies and procedures for communications, ethics and experimentation, priorities and planning, and research funding and personnel.

Thirty-nine committees of scientists review applications for research projects and awards, evaluating their scientific merit. Some 350 researchers provide part-time unpaid input into the activities of the standing and review committees and related undertakings such as on-site visits.

Located in Ottawa and under the direction of the President, a 65-member Secretariat of full-time employees serves the Council, Executive Committee, and all the Council's other committees. This Secretariat comprises the Office of the President; Programs; Scientific Evaluation; University-Industry Programs; Corporate Management; and Communications.

With no laboratories of its own, MRC is responsible for supporting research and research training in health sciences in universities, and their affiliated hospitals and institutes. The Medical Research Council also has a further objective: to promote cooperation between industry, universities and health care institutions in order to enhance the development of knowledge and its application. In addition, the Council administers the health-related grants awarded under the Network of Centres of Excellence Program.

Programs

The MRC achieves its objectives through the following programs:

Research Funding Programs provide support to investigators in medical, dental, nursing, pharmacy or veterinary schools and affiliated institutions, and other departments when the research has clear and direct relevance to human health.

Research Grants meet the direct costs of research in the health sciences as proposed and carried out by investigators.

1. **Operating Grants** support research activities by individuals working alone or in collaboration with others. These grants can be used to

employ assistants or trainees, to purchase materials, supplies, and items of equipment, to buy and maintain laboratory animals, and to support limited travel costs.

2. **Equipment Grants** provide for the purchase of items of equipment for a project.

3. **Multi-User Equipment Grants** augment the research capabilities for a large number of funded investigators within an institution or region. Examples are electron microscope facilities and imaging.

4. **Maintenance Grants** are provided for the operating support and maintenance of facilities of a single investigator.

5. **Maintenance Grants for Multi-User Equipment** cover the cost of maintaining facilities shared by groups of researchers within a department, faculty, university or region.

There are three **Collaborative Research Programs** to cover the cost of multidisciplinary research in the health sciences carried out by teams of investigators working in collaboration.

1. **Program Grants** support a research program involving focused research activities by three or more investigators. The program should be multidisciplinary, and may originate and be carried out in one or several departments, faculties or institutions in Canada.

2. The **MRC Group** is considered a centre of excellence for research and training in the health science field. It supports teams of four or more accomplished investigators for collaborative work over a period of years in what appear to be especially important and productive areas.

3. The Council administers the health-related grants awarded under the **Network of Centres of Excellence** established by Industry, Science and Technology Canada on October 26, 1989.

Other Grants include:

Development Grants furnish support to schools of medicine, dentistry, pharmacy and veterinary medicine in which a research program needs to be developed.

Clinical Trials assess in a rigorous manner the efficacy of diagnostic and therapeutic procedures.

General Research Grants are funds given to Deans of Medical, Dental, Pharmacy and Veterinary Schools for discretionary use to promote local research projects.

MRC and the National Health Research and Development Program (NHRDP) of the Department of National Health and Welfare offer a joint program designed to **develop research in Schools of Nursing**. This is now being evaluated, and new applications are not being accepted.

Council may also fund **Special Programs** outside the regular programs as deemed appropriate.

Through its *Personnel Support Programs*, MRC provides direct support for research personnel or research trainees.

There are five **Research Training Programs** to train investigators:

Farquharson Research Scholarships for training at the undergraduate level.

Studentships for the graduate student to obtain an M.Sc. or a Ph.D. degree.

Centennial and other **Fellowships** for those at post-doctoral level with an M.D., D.D.S., D.V.M., Pharm.D. or Ph.D. degree.

Dental Fellowships for candidates with a D.D.S. degree (or equivalent) nominated by Canadian Schools of Dentistry to increase the number of clinician-teachers capable of independent research work.

The **Clinician-Scientist Program** is designed to stimulate the research training of M.D.s with specialty training and to establish them as independent investigators.

There are three **Salary Support Programs**:

The **Career Investigator Program** provides salary support to a number of highly-qualified researchers who have made research a full-time career. No new applications are being accepted in this program.

The **MRC Scientist Program** aims at supplying salary support for five years to outstanding investigators who have shown promise of being leaders in their research fields.

The **Scholarship Program** affords those who have recently completed their formal research training an opportunity to demonstrate their ability to carry out independent research.

Travel and Exchange Programs offer possibilities for collaboration and exchange of information between Canadian scientists and their colleagues in Canada and abroad. They also support the cost of **Workshops** and **Symposia** addressing health research problems important to Canada in order to reach a consensus. The programs include **Travel Grants**, **Visiting Professorships** and **Visiting Scientists**, and **Argentina-Canada**, **Brazil-Canada**, **China-Canada**, **France-Canada**, **Italy-Canada** and **East European Exchange Programs**.

The *University-Industry Programs* create opportunities for collaboration between Canadian companies and researchers now conducting research in Canadian universities or affiliated institutions. These programs comprise:

University-Industry Collaborative Research Programs (Operating Grants & Clinical Trials) to initiate focused research in health sciences for which there is an industrial need.

University-Industry Research Chairs to provide openings for universities to recruit outstanding investigators who will develop and transfer new knowledge from university to industry.

Industrial Fellowships to allow those with an advanced degree to train in an industrial set-up.

University-Industry Visiting Programs to supply possibilities of spending time in a laboratory as a Visiting Scientist.

Workshops to communicate and solve common problems.

There are also a number of **jointly-sponsored programs**, such as:

The PMAC (Pharmaceutical Manufacturer's Association of Canada) Health Research Foundation/MRC Career Awards;

Ciba-Geigy/MRC Fellowships & Studentships;

ICI Pharma/MRC/University of Toronto Fellowships;

Baxter/Canadian Society of Nephrology/MRC Fellowships.

Price Daxion/Alzheimer Society of Canada MRC Fellowships

Other Activities include a grant to the **Canadian Council on Animal Care**, expenditures for **site visits**, and the **President's Fund**.

MRC PROGRAM GRANTS MARK 15TH YEAR

Each year, The Report of the President highlights a particular aspect of biomedical research being undertaken in Canada by scientists funded by The Medical Research Council.

This year's Report features a series of articles outlining the broad cross-section of biomedical research being carried out by scientists holding Program Grants.

The Program Grants system was introduced in 1976–77 as one of the methods used by MRC to facilitate the further growth of team research efforts in Canada. From their inception, Program Grants were designed to be used to support projects involving closely integrated research activities carried out by two or more investigators. Under provisions of the program, research could be multidisciplinary or within one discipline and could originate and be carried out in one or several departments, faculties or universities. Each part of the program had to be of sufficient quality to merit funding as a separate project under the Operating Grant Program. Further, there was to be an expectation of enhanced productivity by bringing the different components into one program.

Beginning with the first Program Grants competition, Council considered applications originating from investigators holding academic appointments in Canadian health professional schools. However, it would also consider applications from investigators in university faculties outside the health sciences, whether or not the program included projects by investigators in health science faculties. However, the work of the former had to clearly have direct relevance to human health.

Some modifications have been made to the Programs Grants system over the past 15 years. Today, such grants are designed to provide support for research by teams of three or more investigators to undertake collaborative multidisciplinary research in the health sciences in Canadian universities.

The program now provides the opportunity to facilitate scientific interaction to develop new techniques or work on a focused research program by using common facilities and services.

The research setting should permit research training in more than one area of research to expose the trainee to a greater variety of techniques. Grants, therefore consist of several projects, each of sufficient quality to merit funding as a separate project.

Today, the program requires a substantial commitment from the individual investigators to the collaboration. The majority of members of the team are expected to devote 75 per cent of their research efforts to the proposed program but may pursue other avenues of research along with their work in the program. The proposed program may originate and be carried out in one or several departments, faculties or institutions in Canada with one of the applicants selected as coordinator and as such the principal grantee.

In the beginning, Program Grants could be awarded for up to three years and were renewable. Today, a grant may be awarded for up to five years. However, grants for a five-year period are subject to review prior to the end of the third year.

During 1990–91, a total of 40 Program Grants projects valued at $11.8 million were underway.

Search for Clues to Nerve Repair Pursued at University of Alberta

Studies that could open new vistas into ways of promoting nerve repair following brain and spinal cord injuries are underway at the University of Alberta.

Dr. Richard Murphy is head of a team of scientists in Developmental and Molecular Neurobiology which is investigating the cellular and molecular basis of differentiation, growth and regeneration of neurons. The objective is to develop strategies for promoting repair of nerves following injury. While repair of peripheral nerves following injury occurs normally, injured nerves in the brain and spinal cord do not regrow, which has devastating and permanent effects on stroke and spinal cord injured patients and also on patients with neurodegenerative diseases including Alzheimer's disease.

Dr. Murphy is studying the chemistry of the nerve growth factor (NGF) family of neurotrophic proteins, a group of molecules that promotes the growth of nerve cells and also enhances their survival. Chemical studies being done in collaboration with Dr. Ann Acheson indicate that similar portions of these proteins are effective in promoting nerve cell growth, information that may be useful in designing new drugs for treating damaged nerves.

Dr. Acheson is investigating the role of cell adhesion molecules in the differentiation of embryonic precursor cells into neurons, in axonal growth and in axonal regeneration after nerve damage. Axons are the essential conducting portion of nerve fibres.

Dr. Robert Campenot, who developed a compartmented culture system now used world wide, is using the same system to identify second messengers which control neuronal growth and to investigate how phospholipids are inserted into axonal membranes. Working with Dr. Acheson, he is seeking to determine whether leukaemia inhibitory factor induces cholinergic neurotransmitter function by acting at sympathetic nerve endings.

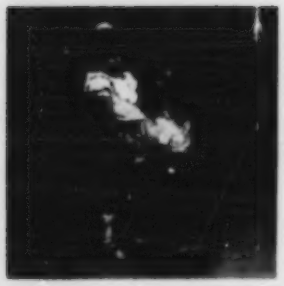
Dr. Freda Miller is investigating how cues internal and external to neurons regulate neuronal gene expression. Her work focuses on the tubulin multigene family, one member of which she has shown to be a sensitive neuronal marker. She and Dr. Campenot are measuring gene expression in neurons grown in compartmented chambers. These studies will hopefully shed light on the environmental cues responsible for inducing gene expression in injured neurons and provide a simple and quick assay for determining the growth state of neurons in newborn and adult animals.

Dr. Richard Smith's research involves molecular movements within axons, focusing specifically on the relationship between the rapid transport of proteins and vesicles that carry them. His work has shown that two per cent of rapidly transported protein becomes fixed within each millimetre of axon and that this amount increases in regenerating neurons.

New Ways to Help Patients with Movement Disorders being developed by University of Alberta Team

Many Canadians suffering from a whole range of movement disorders caused by accidents or disease could benefit from research and developments underway at the University of Alberta.

Physiologist Dr. Richard Stein is directing a Rehabilitation Neuroscience team of researchers probing how the nervous system controls and adapts movements under varying conditions and then how to marry this knowledge to the latest techniques in engineering and computer science. The results could have an important bearing on clinical disorders of motor control. Among its research objectives, the team is striving to develop new methods to improve mobility in individuals with movement disorders. The possible applications of new devices include improvement of walking in patients with spinal cord injuries, strokes or amputations above the knee, improvement of hand function in quadriplegics and reducing the tremor of patients with Parkinson's disease and cerebellar disorders.



A child paralysed from a spinal cord injury uses a modified walker holding a device that provides electrical stimulation to her leg muscles to make walking possible.

The team, which is now linked to others across Canada in a Network of Centres of Excellence on Neural Regeneration and Functional Recovery, has a number of Canadian "firsts" to its credit. Among its achievements were the use of electrodes passing through the skin to record chronically from deep-lying muscles for control of powered artificial limbs, the use of "touch control" to restore the ability of amputee musicians to play professionally, the first use in Canada of percutaneous wires to restore the ability of patients with paralysis affecting all four limbs to grasp objects and the use of percutaneous wires to restore hip flexion and thereby improve the gait of stroke patients left with hemiplegia or one-sided paralysis. The team also developed a practical system for restoring gait to patients with paraplegia from spinal cord injury and applied a fully implantable device for controlling movement of paralysed muscles by means of telemetry or radio waves.

They are also investigating the structure of the neural network within the spinal cord that generates the basic alternating pattern of walking in vertebrates.

Another project involves investigating the mechanisms of nerve growth and recovery of muscle function after central and peripheral nerve injuries. Questions include: "Are there peripheral factors that may be applied to central neurons to enhance what is normally a very limited growth after injury? To what extent can the effects of inactivity following spinal cord injury be reversed by electrical stimulation or other treatments?"

Other members of the team include Drs. Keir Pearson, Arthur Prochazka, Tessa Gordon, Dejan Popovic and Thomas Martin.

UBC Scientists Seek New Drug Therapy for Pregnant Women, Newborns and Children

Safer and more effective drug therapy for pregnant women, newborn infants and children could result from a major study being conducted by researchers at the University of British Columbia.

A multidisciplinary team of scientists headed by Dr. James Axelson of the Faculty of Pharmaceutical Sciences is probing the kinetics, effects and toxicology of drugs used in pregnancy, newborns and during childhood.

According to Dr. Axelson, despite a greater awareness of the potential hazards of drugs in pregnancy, many, including over-the-counter preparations, are used on a wide scale during this period.

For example, one survey has shown that 23 per cent of pregnant women take non-prescription medications containing antihistamines.

Further, there is now more effective drug therapy for heart disease, epilepsy and high blood pressure disorders, along with better obstetrical understanding of these conditions when they occur in pregnancy. This, explains Dr. Axelson, has resulted in the more common use of drugs to treat these and other pregnancy complications such as premature labour.

In addition, there is an increased use of agents to treat fetal disorders by giving drugs to the mothers-to-be. With the marked advances in neonatal care premature infants are surviving at much earlier gestational ages and these infants often have medical problems which must be treated with drugs.

Drug use has also increased during the childhood period in order to treat illnesses such as leukemia and epilepsy.

"In spite of these factors which have led to increased drug use in pregnancy, the newborn and childhood, knowledge of drug pharmacokinetics, pharmacodynamics and toxicology in these populations have not kept pace with the steady introduction of new therapeutic agents," said Dr. Axelson.

The research is aimed at obtaining a better understanding of drugs in pregnancy and childhood in order to provide safer and more effective treatment with them.

Other co-investigators on the team are: Drs. Frank Abbott and Wayne Riggs of the Faculty of Pharmaceutical Sciences; Dr. Dan Rurak, Department of Obstetrics and Gynecology and Dr. Kevin Farrell of the Department of Pediatrics of the Faculty of Medicine.

New Treatments for Brain Degeneration Disorders Quest of University of British Columbia Team

New approaches to treatments aimed at slowing down the progression of a number of neurodegenerative diseases like Parkinson's and Lou Gehrig's diseases could emerge from research underway at the University of British Columbia.

There, Dr. Donald Calne and colleagues working in a multidisciplinary group are studying the most common neurodegenerative disorders that lead to immobility — Parkinson's disease and amyotrophic lateral sclerosis (ALS), Lou Gehrig's disease.

According to Dr. Calne, an internationally known neurologist, the causes of these diseases are unknown so they are being compared with Huntington's disease, another chronic neurological disorder that afflicts similar regions of the brain but which has a known genetic cause.

The team of scientists is using a number of techniques including Positron Emission Tomography (PET), clinical pharmacology, electrophysiology, immunohistochemistry, cell culture and molecular biology in its investigations. It will look for methods of detecting abnormalities in the brain before disease symptoms occur and the team has already had some success in this area. It will be employing new approaches to treatment in an effort to reduce the rate at which nerve cells die in these disorders. Among them, drugs will be studied that interfere with the release of potentially harmful "excitatory" substances in the brain. For example, in Parkinson's disease and ALS, there have been a number of hypotheses put forward on the cause as a result of studies of a form of

the disorder that occurs in high incidence on the island of Guam. One suggested cause of the Guamanian disease is an excitotoxic agent.

This, in turn, has stimulated interest in a search for an excitatory agent in classical Parkinson's disease and ALS.

In its Parkinson's disease research, the team has studied patients and normal individuals with PET scanning and will follow the same groups over time. Individuals suffering from diseases like Parkinsonism show a lack of dopamine, a vital neurotransmitter or messenger chemical in the brain and must be given drugs to alleviate the symptoms of the disease.

Besides the director, the team comprises Drs. Andrew Eisen, Michael Hayden, Seung Kim, Charles Krieger, Edith McGeer, Brian Pate, Thomas Ruth, Barry Snow and Joseph Tsui.

Cure for Two Common Vision Disorders Goal of U.B.C. Based Research Project

Enormous numbers of people suffering from two vision disorders may have normal sight returned in the future if research underway at the University of British Columbia is successful.

Dr. Max Cynader is director of a project in which a team of scientists is exploring the brain mechanisms underlying strabismus and amblyopia. Strabismus is a common condition affecting over 5 million North Americans in which the two eyes fail to point in the same direction. There are two types of this disorder, convergent, in which one or both eyes turn inward and divergent, in which both eyes turn outward. While the problem of strabismus may involve alterations in the eye muscles, in many cases, the real problem is inside the brain, explains Dr. Cynader, a professor of ophthalmology at UBC.

Amblyopia is associated with strabismus and refers to the phenomenon of "lazy eye." It results in reduced visual capacity in one or both eyes in the absence of any obvious peripheral defect.

Dr. Cynader's group and others have found that amblyopia often results from inappropriate stimulation of one or both eyes during the early period of development after birth. Their research is devoted to understanding how visual exposure early in life can lead to the permanent visual defects of amblyopia and to the visual-motor deficits of strabismus.

One member of the team, Dr. Donald Mitchell of Dalhousie University, has developed new and sensitive measures of visual resolution and acuity, and has devised new therapeutic regimes to provide for recovery of function.

The team's research to date has, among other accomplishments, demarcated the part of the brain which appears to be critically affected in amblyopia. They have shown that the retina and peripheral ocular apparatus is basically normal in most forms of the disorder and that the problems lie at the interface point at which visual information flows into the visual cortex of the brain. They are investigating the mechanisms by which visual information flow takes place in the normal cortex and comparing this with the situation in amblyopia.

Under normal circumstances in which both eyes see well, most of the surface of the visual cortex is shared between the two eyes. However in strabismus, these zones of shared control are dramatically reduced with each eye competing for exclusive input to a zone of the cortex which results in a breakdown of communication between inputs from the two eyes resulting in

reduced binocular vision. This situation is worsened in amblyopia where, although the eye itself may be functioning normally, its connections to the cortex are lost and the amount of cortical territory that it has available to work with may become increasingly small.

Investigations into the ways in which inputs from the two eyes are laid out across the cortical surface and how they are affected by atypical visual exposure are being carried out by Drs. Nicholas Swindale and Joanne Matsubara.

Research has revealed that both amblyopia and strabismus occur with inappropriate visual stimulation during a "critical period" in early postnatal life. In humans, abnormal visual exposure during the first year or two of life may lead to permanent visual defects.

The team has found that several different kinds of neurotransmitter receptors in the brain which are crucial for signalling between cells within the visual cortex, are present in specific cell populations only during this critical period. They believe that the transient expression of these receptors lies at the heart of the critical period and their hopes for curing these visual dysfunctions rests in being able to re-introduce the critical period in adult.

"If we can re-create in adult subjects the conditions that occurred in early development, then we have the possibility of applying treatment conditions, such as intensive orthoptic therapy, even in adults," says Dr. Cynader.

Another member of the team, Dr. Franco Lepore of the University of Montreal, has shown that the corpus callosum, a fibre tract connecting the two visual hemispheres of the cortex, plays an essential role in midline binocular vision and has determined the deficits associated with this pathway in experimental amblyopia and strabismus.

Finally, using molecular biology techniques, the team hopes to make it possible for an eye that had lost control of its share of the cortex to regain it. If this occurs, it could bring about recovery both of visual capacities and binocular vision.

New Data on Schizophrenia, Better Drugs Sought by University of British Columbia Team

New insights into schizophrenia, coupled with rapid screening of new antipsychotic agents with fewer side effects, could be among the benefits to accrue from research being conducted by a team of scientists at the University of British Columbia.

Dr. Christian Fibiger, of the Department of Psychiatry, is coordinator of a project directed toward obtaining fundamental information concerning the physiology, pharmacology, regulation and behavioral function of groups of neurons known as dopamine-containing neurons in the brain both in health and disease states.

According to Dr. Fibiger, there is substantial evidence that these neurons play an important role in schizophrenia, depression and Parkinson's diseases which are among the most common and debilitating psychiatric and neurological diseases in the world today.

In Parkinson's disease, for example, dopamine-containing neurons in a region called the substantia nigra are known to die prematurely and the most common treatment is based on replacing dopamine in the brain by giving patients L-DOPA, the chemical precursor of natural dopamine.

In contrast, the most commonly used drugs in the treatment of schizophrenia are agents that block dopamine receptors in the brain. This, says Dr. Fibiger, suggests that certain dopamine containing systems may be abnormally active in the brains of schizophrenic patients.

His team, which includes Anthony Phillips and Charles Blaha, of the Department of Psychology, is making use of new techniques such as in vivo brain microdialysis and voltametry to measure the release of dopamine in discrete regions of the brain of experimental models.

In related studies, the team is developing procedures that will permit for the first time the precise identification of the brain regions and the particular neurons in those regions that are targeted by antischizophrenic drugs. They hope to soon be in a position to precisely identify the brain structures that mediate both the therapeutic and unwanted side effects of these drugs. The research, they feel, has the potential not only of providing new insights into the pathophysiology of schizophrenia, but of paving the way to the development of a fast and detailed screening system for new antipsychotic compounds without the serious side effects inherent in most of the drugs being used today.

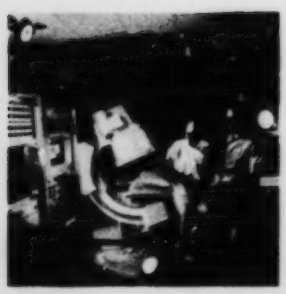
Arrhythmic Cardiac Death, High Blood Pressure Probed by University of Calgary Scientists

Research that could provide important new insights into cardiovascular disease, the No. 1 killer of Canadians each year is underway at the University of Calgary.

There, a multidisciplinary team of scientists is conducting investigations into arrhythmic cardiac death and high blood pressure, both intimately linked to ischemic heart disease. The research team, directed by Dr. D. George Wyse of the Division of Cardiology at Foothills Hospital, comprises cardiologists, physiologists and pharmacologists studying the electrical activity of the heart and blood vessels and the effects of drugs on this electrical activity in both healthy and diseased tissues.

The clinical focus of the team is arrhythmic cardiac death, its treatment with drugs and devices; and investigation of high blood pressure.

Cardiovascular disease is the single most common cause of death in Canada accounting for about 80,000 or 40 per cent of all deaths each year. Among these, 50,000 are due to ischemic heart disease half of which are arrhythmic deaths involving rapid and chaotic beating or fibrillation of the ventricles, the main pumping chambers of the heart. During this condition, known as ventricular fibrillation, the heart does not pump. Failure to reverse this leads to death.



Dr. George Wyse, at right, with heart patient in the cardiac electrophysiology laboratory of Foothills Hospital in Calgary.

"Approximately 25,000 to 30,000 Canadians die each year from arrhythmic cardiac death," says Dr. Wyse, adding that high blood pressure, which afflicts up to 20 per cent of adults, is an important risk factor for ischemic heart disease and stroke which together account for 65,000 of the 80,000 deaths each year.

The team is tackling the problems through several projects including a patient-based study related directly to the clinical problems of ventricular tachycardia, a condition of rapid but less chaotic beating of the ventricles which often precedes the onset of ventricular fibrillation.

Another project involves examination of the benefits and risks of using combinations of two different antiarrhythmic medications.

Many drugs used to treat arrhythmias and high blood pressure work by altering movement of ions such as sodium, potassium and calcium across cell membranes and Dr. Wyse suspects part of the reason people have arrhythmias or high blood pressure may be related to abnormalities in the movement of these ions. Yet another project is looking into the movement of ions. Another project is closely examining this possibility at the molecular level.

Other members of the research team include: Robert Clark, Henry Duff, Robert French, Wayne Giles, Anne Gillis, Brent Mitchell, Robert Sheldon and Chris Triggle.

Membrane Metabolism Probe at Dalhousie Could Advance Attack on Nerve Diseases

Research that could lead to more effective intervention in a number of disorders, including nerve degenerative diseases, is being carried out by a team of scientists at Dalhousie University.

Dr. Harold Cook, director of the Atlantic Research Centre for Mental Retardation, and colleagues David Byers, Frederick Palmer and Matthew Spence want to determine how the lipid or fatty molecules and protein components of cell membranes are organized and maintained during growth and development. They also hope to determine how alterations in the normal construction or replacement of these components relate to specific diseases. Through their investigations, they hope to learn how membrane and cell damage caused by certain diseases, injury or aging might be altered or prevented.

Their research could shed new light on ways to more effectively intervene in a number of diseases including peroxisomal diseases, Niemann-Pick disease and neurodegenerative diseases, particularly where lipid metabolism is involved. Peroxisomal diseases represent a broad class of genetic disorders that can cause mental retardation and death early in life or later on. The most common of these is adrenoleukodystrophy.

A student and technician examine electrophoresis gel.

Dr. Cook, a professor of pediatrics at Dalhousie University, explained that health and well being are largely determined by the state of individual cells that make up the tissues and organs of the body. The functions of these cells are influenced both by genetic information and by a range of normal or potentially harmful nutrients and environmental factors.

The team is using sophisticated methods of growing cells that have been isolated from healthy humans and patients with identified diseases or inherited disorders and from animal tissue.

Most investigations involve skin cells or nerve tumour cells, with special interest in brain and nervous system diseases.

To date, the team has discovered that many processes of lipid assembly and degradation within the cell, such as formation and storage of cholesterol, modification of unsaturated fatty "side chains" and synthesis of phospholipids from basic nutrient molecules, involve intricately channelled and linked processes associated with membrane structures.

Signals arriving at the outer surface of cells, including nutrients, hormones, nerve cell transmitter molecules and growth factors, generate a series of events inside the cell. The scientists are assessing these changes within specific types of brain and skin cells under normal, disease and drug-altered conditions.

McGill Team Hopes to Reduce Infections that Hit High Risk Surgical Patients

Research underway at the Royal Victoria Hospital in Montreal could help reduce the incidence of potentially life-threatening infections and other complications among certain high risk surgical patients.

There, a team of scientists led by Dr. Nicolas Christou, is investigating the immune system of patients slated for surgery to determine their ability to fight infection after surgery or injury.

Dr. Nicolas Christou, at right, and a patient hold a bag of nutritional manipulative solution like the one the patient was given to successfully boost his body's immune system prior to surgery.

According to Dr. Christou, who is an associate professor of surgery at McGill University, some patients admitted to hospital for elective surgery or after an accident, have reduced capacity to resist infection. If infection does develop, some individuals die at a higher rate than others. "These infections are costly to society, because patients spend more time in the hospital, usually in an intensive care unit," he said, adding: "the cost to the patient who dies needs no discussion."

The team, which includes Drs. Julius Gordon, Jonathan Meakins, Carl Nohr and Harold Rode, all from McGill University, has found it can identify patients at high risk of death after a major infection in hospital using a simple test which uses antigens, similar to those used for allergy tests, injected into the skin. The test, known as a delayed type hypersensitivity (DTH), identifies the patients at risk by singling out those with abnormalities of their immune systems. Patients who react to the tests respond appropriately to their infection and survive. However, 75 per cent of those with no skin reactions who develop a serious infection die from the complications of the infection. The researchers believe that if they can understand the mechanism behind the immune system failure, it will be possible to correct the faults with treatment and improve the patients' chances of surviving a serious infection in hospital.

The team is also examining how abnormalities of the immune system interact with other systems, such as the cardiorespiratory system, which are needed to survive an infection. For instance, nutritional deficits in some patients may produce abnormal immune function. These patients are being given a special solution intravenously in an attempt to correct the defects.

They are also carrying out investigations aimed at finding ways to regulate the function of one type of white blood cell which in anergic patients may be overreacting to an infection and digesting not only the invading bacteria causing the infection, but normal tissues such as lungs and blood vessels of the muscles.

Their studies are also probing into how to restore the function of B cells which produce antibodies to invading bacteria but are not working properly in anergic patients. They are also examining T cells which are responsible for regulating the immune system but somehow do not function properly in anergic individuals.

Body's Complex Defence System Mechanisms Probed by McGill University Scientists

New understandings of the mechanisms of the body's complex defence system which could prove important in autoimmune diseases and in the organ transplant field are emerging from research underway at McGill University.

There, a team of scientists headed by Dr. Ronald Guttmann is investigating the role of the immune system and the major histocompatibility

complex in both autoimmune disease and organ transplantation. Other team members are Drs. Eleanor Colle, Abraham Fuks and Gérald Prud'homme.

At present, non-specific immunosuppressive drugs are required for organ and tissue grafts to be specifically accepted by recipients. However, graft tolerance, without an episode of rejection, remains a major problem .

The McGill team has investigated how lymphocytes with natural suppressor (NS) activity may work to prevent rejections and has demonstrated that NS lymphocytes exist in high numbers in immunosuppressed kidney transplant patients. They are currently probing the mechanisms by which NS cells suppress T lymphocyte responses and how they may influence long-term graft function. They are concerned that non-specific suppression of other immune responses may lead to long-term complications such as infection and cancer in transplant recipients.

In bone marrow transplants, the reaction of the immune cells of the graft against the recipient causes graft versus host disease (GVHD), which can be fatal. Using an experimental model system, the team has shown that the anti-rejection drug cyclosporine has contrasting effects whereby it can enhance T lymphocyte clonal deletion, yet prevents the development of T lymphocyte clonal anergy, or diminished sensitivity to specific antigens depending on dose.

Although the effects on anergy may be detrimental by inducing autoimmunity, the enhancement of clonal deletion is beneficial and is the first example of drug-induced specific tolerance by clonal deletion.

These effects of cyclosporine may have important clinical implications and modulation of tolerance with drugs is one of several ongoing projects on tolerance being carried out by members of the team dealing with transplantation.

They have also been studying the pathogenesis of Type I juvenile diabetes mellitus and are analyzing the islet cell antigens which stimulate autoaggressive T lymphocyte responses. They have identified a protein which stimulates autoaggressive T lymphocyte clones and the characterization of this antigen would represent a major advance. Their animal model studies of diabetes have suggested that at least three genes are necessary for the full expression of the disease. Their studies, they feel, have provided a framework for understanding the genetics of the human disease where a permissive major histocompatibility allele is also a necessary component for susceptibility to the disease. An allele is any one of a series of genes that may occupy the same position on a specific chromosome. Dr. Guttmann is with the McGill Centre for Clinical Immunobiology and Transplantation; Dr. Colle is from Montreal Children's Hospital, Dr. Fuks, the McGill Cancer Centre and Dr. Prud'homme, McGill's Department of Pathology.

Markers for Different Types of Cancer Being Sought by McGill Scientists

A search for "markers" that might make it possible to identify the presence of different types of cancers early in the disease process is being conducted by a team of scientists at McGill University.

The team headed by Dr. Cliff Stanners at the McGill Cancer Centre, is probing the role of the carcinoembryonic antigen (CEA), one of a family of

molecules which appear on the surface of a variety of cancer cells including those which arise at the most common sites such as the colon, breast and lung.

CEA is used extensively today as a tumour marker for the management of bowel cancer. However, until recently the precise nature and extent of the family of molecules was unknown. Further, the normal function of these molecules and the relevance of their presence on cancer cells to the process of cancer transformation was totally unknown.

Five years ago, their laboratory, along with others, cloned the gene for CEA which in turn led to the precise characterization of CEA and its family members. The cloned gene was used as a specific probe to determine exactly which family members were over-produced in which tumours. Besides using this information to develop more specific markers for other types of cancer, his team used the cloned CEA gene to investigate the possible functions of CEA.

So far, they have shown that it can specifically stick cells together and thus function as an intercellular adhesion molecule. The characteristics of this adhesion process vary greatly with the different members of the CEA family and are being interpreted to shed some light on how CEA and its family members function normally. Because adhesion molecules are responsible for the fidelity of the organization of cells into tissues, the abnormal production of these molecules could possibly disrupt normal tissue architecture and contribute to the development of disorganized cancer cells. In addition, adhesion molecules have been shown to be involved in the processes of invasion and metastasis or spread of cancer to other areas.

The team is now investigating the possible role of CEA in such cellular properties in both normal and cancerous tissue.

Besides Dr. Stanners, the team comprises Drs. Abraham Fuks and Nicole Beauchemin.

New Treatments for Gastrointestinal Disorders Sought by McMaster University Scientists

New approaches to treatment of gastrointestinal (GI) disorders could be developed through research being carried out at McMaster University.

There, a team of scientists headed by Dr. Edward Daniel is delving into the mechanisms that control gastrointestinal motor function both in health and disease. During the past year, the team has obtained new insights into the role of a sparse but critical set of cells called Interstitial Cells of Cajal. These cells are connected electrically to smooth muscle and the scientists have obtained evidence that they are the pacemakers of GI motor function.

McMaster team member, Dr. Jan Huizinga.

"In their absence or if they malfunction, we believe gut motor function will be ineffective in transporting products of digestion, causing distention, pain, constipation and possible death," says Dr. Daniel. He explained that until the present time, the changes in these cells in disease states such as achalasia, Hirschsprung's disease or pyloric stenosis had never been investigated.

His team is enthusiastic over another finding that nitric oxide may be the inhibitory mediator of the GI enteric nervous system. Most scientists have long argued that a major neurotransmitter, vasoactive intestinal polypeptide (VIP) was the mediator involved.

In another segment of their research, the team is looking into the control mechanisms involved in the release of VIP and motor consequences. Their studies have revealed a complex control over this release such that when

release is at a high level GI motor function is absent but when VIP release is turned off, there is usually, though not always, an increase in motor activity and motility in the gut.

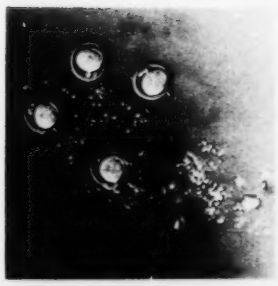
Other members of the team are: Drs. Nicholas Diamant, Jo-Ann Fox, Thomas McDonald and Jan Huizinga.

Vaccine Contraceptives among Objectives of University of Montreal Researchers

One or more forms of contraceptive vaccines could be available before the turn of the century through research being conducted by a University of Montreal team.

The team of scientists headed by Dr. Gilles Bleau, is working at Maisonneuve-Rosemont Hospital Research Centre affiliated with the university, and is carrying out a broadly based project investigating male and female infertility, contraception, embryonic development, hyperplasia and cancer of the prostate.

In the area of contraception, the team is striving to develop antifertility vaccines directed against two newly discovered proteins of the gametes. The first is an epididymal protein taken up by sperm and the second, an oviductal protein (oviductin), taken up by the egg.



These are fertilized oocytes. The contraceptive vaccines being developed are aimed at inhibiting fertilization.

"These two new candidate targets stand a good chance of leading to the contraceptive of the year 2000," says Dr. Bleau, an associate professor of obstetrics and gynecology.

In the search for new diagnostic and therapeutic approaches to male and female infertility, the team is studying the production and maturation of the gametes, the series of events leading to fertilization and the development of the embryo up to the stage of implantation in the uterus. In the male, it is investigating the function of the epididymis since it is during their transit through this organ that the spermatozoa undergo changes in protein and lipid composition, along with an increase in their intrinsic density. "We believe that these maturation processes are good indicators of the fertilizing ability of the spermatozoa and a reliable means of evaluating male fertility," the director said.

In a recent pilot study, the team found a significant improvement in the quality of spermatozoa when infertile men received supplements of selenium and Vitamin E.

In their female infertility work, the researchers are concentrating on oviductin, a protein that is secreted by the fallopian tube and becomes associated with the ovulated egg. They speculate that this protein supports and protects the early embryo and may be involved in preventing disorders of the fallopian tube, diseases that are common causes of female infertility and can lead to life-threatening ectopic pregnancies.

Prostate cancer is the second most common form of malignant tumour in men. In addition, older men develop benign prostatic hyperplasia or hypertrophy, a condition involving varying degrees of bladder outlet obstruction. The team is trying to explain the cellular mechanisms responsible for normal and abnormal growth of this gland. They believe the prostate is stimulated by a prostatic growth factor (PGF), which acts through a putative growth factor receptor complex involving a novel form of protein tyrosine kinase activity. They are purifying and analyzing both the PGF and kinase.

Through their research endeavours, the team is studying the mechanisms of action of PGF and hopes to synthesize analogues of PGF and produce antagonists of the receptor for the prevention and treatment of benign hyperplasia and cancer of the prostate.

Other members of the team are: Drs. Alcide Chapdelaine, Simone Chevalier, Kenneth Roberts, and Robert Sullivan.

University of Montreal Researchers Seek New Pain-Relieving Drugs

New pain-relieving agents that reduce or possibly eliminate the side effect problems of tolerance and dependence common to morphine and some other drugs could come about through research underway at the University of Montreal.

Dr. Philippe Crine is directing an MRC project that probes the basic processes related to factors which regulate the effects of certain natural peptides produced naturally in the body which have morphine-like activity. According to Dr. Crine, the effects of these peptides, known as enkephalins and endorphins, are largely regulated by factors which influence their production, movement to the site where they have effects and their subsequent degradation.

His team's research is aimed at trying to understand these basic processes and they are making use of simplified models of cells which resemble to some extent neurons in the brain. They are using genetic manipulation techniques to introduce genes to synthesize neuropeptides in these cells. They hope to learn how these neuropeptides are made and then packed into tiny bags called neurovesicles. They believe this packaging process is probably crucial for these neuropeptides since the neurovesicles are the location where the peptides are activated and stored before being secreted to exert their effect on pain and mood.

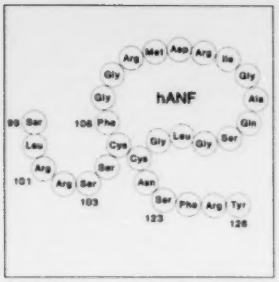
They are also investigating the structure of an enzyme responsible for the degradation of opioid-like peptides. By inhibiting these enzymes with drugs, it is possible to induce analgesia. They hope that with a better understanding of their structure it will be possible to synthesize more specific inhibitors to alleviate pain while avoiding the problems of tolerance and dependence encountered with morphine and even the natural opioid peptides.

Other members of the team are: Drs. Guy Boileau and Luc DesGroseillers.

University of Montreal Team Investigates Cardiac Hormones

A research program underway at the Clinical Research Institute of the University of Montreal could produce important information about the cause of cardiovascular disease and its effective treatment.

Drs. André De Léan, Jacques Drouin, Mona Nemer and Huy Ong are investigating the genetics and pharmacology of atrial natriuretic peptides (ANP). These substances are a growing family which at present includes three distinct but related genes which are mainly expressed in the heart and central and peripheral nervous systems. The best known of these is atrial natriuretic factor (ANF), a hormone isolated from heart tissue. Atrial peptides are potent agents for dilating or opening blood vessels and inhibitors of the renin-angiotensin system as well as natriuretics and diuretics.



The molecular structure of atrial natriuretic factor, an important hormone isolated from heart tissue.

The peptides are also found in the brain where they appear to be associated with the regulation of thirst and the production of the pituitary anti-diuretic hormone vasopressin.

According to Dr. De Léan, studies of the pharmacology and molecular biology of these polypeptidic hormones are central to the understanding at the molecular level of their involvement in the regulation of cardiovascular homeostasis and their involvement in the etiology and treatment of cardiovascular diseases. In addition, the sites of action of these peptides are also the targets for new therapeutic agents being developed.

The successful cloning of ANP genes, the isolation and cloning of receptors, among other developments, have enabled the team to tackle other questions about the regulation of cardiac hormones and the cellular signalling mechanisms mediating their biological effects in normal and disease states.

The team feels that the successful combination of the study of cardiac hormones and of their receptors at both the protein and gene levels will make possible much more complete and detailed understanding of their molecular properties.

The cloning of the gene for the new cardiac peptides, combined with the pharmacological study of the factors regulating its biosynthesis, will help the researchers understand the tissue-specific factors differentially regulating the expression of the various cardiac hormones.

Liver Disease, Better Organ Preservation Thrust of University of Montreal Project

New insights into liver functions that could lead to better treatment for liver disease and organ preservation for transplant are being obtained by a team of University of Montreal scientists.

Dr. P.-Michel Huet, director of the Centre de recherche clinique André-Viallet at the Hôpital Saint-Luc, is coordinator of a major project in which a team of researchers is investigating various liver functions, including its capacity to regenerate.

One team member, Dr. Marielle Gascon-Barré, is examining the effects of the relationships between calcium and Vitamin D in the hepatic regeneration process. The liver is a unique organ in which a loss of functional mass may, within minutes of an injury, generate all the stimuli required for regeneration. While all the cell events involved in triggering the mechanism of this compensatory growth are not yet known, calcium and several hormones and growth factors appear to be essential to the regeneration process.
Dr. Gascon-Barré's team has recently advanced the theory that the hormone of the endocrine system of vitamin D may play a key role in this regrowth of the liver.

The team's other projects carried out by Drs. Jean-Pierre Villeneuve and Huet are aimed at studying the effects of chronic liver diseases, such as cirrhosis, in order to develop new treatment approaches. Cirrhosis is a chronic, progressive liver disease that often leads to death. It is caused not only by excessive drinking, but by such factors as genetic abnormalities, viral infections, toxins and others. For some individuals with terminal liver disease, transplantation is the only effective treatment.

Dr. Villeneuve is studying the alterations in liver metabolism that occur in cirrhosis. A key function of the liver is to rid the body of certain

A cirrhotic liver from a patient with a liver transplant during in vitro perfusion studies.

substances, such as hormones, bile acids, fatty acids, medication and toxins. In cirrhosis, the metabolic role of the liver is reduced but the mechanisms for this remain unclear.

Dr. Villeneuve is comparing two theories (the intact cell theory and the sick cell theory) regarding the cause of this, the findings of which could lead to major changes in the traditional concepts of liver failure in cirrhosis.

Dr. Huet, whose project involves liver transplantation, is investigating the mechanisms responsible for alterations of the liver that occur between its removal from the donor and transplantation into the recipient. According to Dr. Huet, if liver transplantation is to be considered an acceptable and effective treatment for patients suffering from terminal liver disease, the main problem today is preservation of the organ.

There are several periods between organ removal and transplant that may affect the fate of the liver after transplant. In his studies, Dr. Huet hopes to identify the possible interactions between the respective alterations of different liver cell populations in the final response of the organ at the time of reperfusion.

Drs. Gascon-Barré and Roger Butterworth with the aid of another MRC grant have purchased a state-of-the-art double beam spectrofluorometer with a microscope. It is being used to evaluate the response of hepatic intracellular calcium to various hormonal stimuli to growth factors, and, in the near future, to ischemia.

New Agents to Combat Atherosclerosis Sought at Montreal Research Institute

New agents against coronary atherosclerosis, a major cause of heart attacks, strokes and other blood vessel diseases, could emerge from research being carried out at the Clinical Research Institute of Montreal.

A team of scientists headed by Dr. Yves Marcel is investigating the mechanism and function of a number of lipoproteins, multimolecular complexes which use the properties of specific proteins to transport lipids, or fatty acids throughout the body.

Drs. Marcel and Ross Milne, with their colleague Eric Rassart of the University of Quebec at Montreal, are identifying and defining the specialized areas of apolipoproteins, notably one type, the primary role of which is to transport triglycerides.

Unfortunately in man, says Dr. Marcel, this protein remains in circulation to become the vehicle for the transport of cholesterol in a lipoprotein called LDL or low density lipoprotein, which plays a key role in the development of coronary atherosclerosis. Dr. Milne and his colleagues have recently delineated the area of apolipoprotein B (apoB) which allows capture of the LDLs by their cellular receptor. Precise knowledge of this would provide an understanding of how LDL bonds with its receptor and possibly lead to the development of agents to stimulate this bond which would permit accelerated breakdown of LDL by the liver.

LDL delivers fat and cholesterol to all cells through the apoB proteins, which bind to a receptor on target cells. Since the cells use the LDL cholesterol for their own maintenance, only excessive LDL cholesterol is believed "bad" and harmful. However, other lipoproteins, such as HDL or high density lipoprotein, are considered beneficial and carriers of "good cholesterol."

It is believed that HDL exerts its protective effect against atherosclerosis by removing excessive cholesterol from cells and returning it to the liver where it is degraded. Dr. Marcel's team is studying the major protein of HDL, apoA-1, which plays a key role in this mechanism of cholesterol elimination.

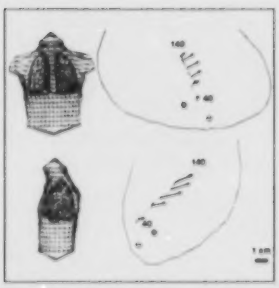
The researchers are also investigating cholesterol ester transfer protein (CETP), another protein essential to the transport of cholesterol. This substance controls a significant "crossroads" in cholesterol transport switching cholesterol away from the good pool of HDL. In this area, their research is focused on understanding how gene coding for the protein is closely controlled by cholesterol movements in the organism.

Dr. Rassart is heading research that is examining another protein, apoD, the gene of which is expressed in numerous tissues where the protein apparently serves to transport small molecules including cholesterol and highly specialized hormones such as progesterone and pregnenolone.

Heart Electrical Disturbance Abnormalities Probed by University of Montreal Researchers

Refined diagnostic and treatment approaches aimed at preventing the development of more serious problems in patients suffering from electrical disturbances of the heart are among the objectives of a research project underway at the University of Montreal.

A multidisciplinary team of scientists headed by Dr. Fernand Roberge hopes to improve understanding of cardiovascular diseases, particularly cardiac electrical disturbances and arrhythmias. These abnormalities are associated with organic problems such as heart attacks, tissue malformations such as Wolff-Parkinson-White syndrome and with irritations of hormonal or metabolic origin that lead to rapid and/or chaotic heart rhythm.



Non-invasive localization of cardiac electrical activity. The position, magnitude and orientation of a dipolar current source are computed so as to simulate on the surface of a model, a potential distribution which is identical to the one recovered over the subject's torso.

Besides using electrical mapping and pacing techniques developed in their Biomedical Instrumentation Laboratory, the team makes extensive use of computer models to integrate knowledge and data from the molecular, cellular and tissue levels with observations on the beating heart. This makes it possible to use non-invasive methods to precisely characterize the heart's electric abnormalities, determine the site of their origin and to follow their effects throughout the entire heart cycle. So far, the scientists have been able to accurately locate and characterize the accessory pathways of Wolff-Parkinson-White syndrome and the centre of abnormal "automaticity" in some cases of ventricular tachycardia where there is erratic rhythm in the ventricles of the heart.

Cardiologists have made use of the computer-based techniques to assess the effectiveness of electrical "pacemaking" of the heart and of drug treatment of these conditions.

According to Dr. Roberge, the research should lead to a deeper understanding of the functional and structural factors governing the heart excitation process, the spread of electrical impulses and the development of contraction in heart tissue.

"From such an approach, we expect to be able to develop refined diagnostic and treatment approaches, tailored to specific cardiac electrical disturbances, which can address the primary causes of these ailments and thus prevent the development of more serious conditions."

Other members of the team are: Drs. René Cardinal, Ramesh Gulrajani, Robert LeBlanc, Réginald Nadeau, Pierre Pagé, all of the University of Montreal and Robert Guardo and Pierre Savard, both of École Polytechnique de Montréal, an affiliate of the university.

Effect of Aging on Brain Function Probed by Montreal Research Team

New insights into the effects of aging on brain function both in health and disease are emerging from major ongoing studies at the Research Centre of the Côte-des-Neiges Hospital in Montreal.

There, a multidisciplinary team of scientists, under the direction of Dr. André Roch Lecours, is carrying out a broad program of research focusing on the relationship between brain function and behaviour patterns. Alzheimer-type dementia and cerebrovascular diseases are the principle target disorders of the research program.

The research has a number of objectives including the advancement of understanding of cognitive and neurobiological mechanisms inherent with advanced brain aging. Out of its studies, the team hopes to identify methods for early detection, diagnosis and eventual prevention of deterioration of brain function caused by dementia and cerebrovascular disease. It also hopes to improve methods geared to cognitive rehabilitation in cerebrovascular diseases and to evaluate new and future drug therapies.

The program comprises a total of eight projects centred around the study of senescence and of disease entities affecting attention, perception, memory, language and voluntary movements.

Among its findings, the team has observed that Alzheimer-type dementia may alter almost all the cognitive abilities or may change a given cognitive area such as memory, language or time-space orientation. If one specific aspect of the cognitive sphere is deeply altered, for instance, there may be a dementia in which the clinical symptoms affect language and in which word evocation is deeply changed, but in which word liaison to form phrases is not changed.

They have also contributed toward the discovery that in humans, memory is composed of an assembly of interacting systems, some of which involute with the onset of normal aging while others are not affected.

According to the Côte-des-Neiges team, normal aging does not affect abilities to perform certain types of voluntary movements such as handling objects. However, some other types of abilities such as mime and drawing may, even in the absence of any form of detectable brain disorder, be altered in such a way that if one observes the behaviour it could be considered as the symptom of a cerebral focal disease in a younger adult.

The team has found that normal aging may modify almost every type of language behaviour such as wording, repetition, reading aloud and taking dictation, all characteristics which clinicians may use for evaluating and diagnosing speech disorders. The team stresses that language performance changes with passing time and in certain instances one can be left with the impression that the changes indicate the presence of a disease when in reality none exists.

Normal aging, they say, should not be taken as some kind of automatic indicator of a disease state.

Their studies have further demonstrated that not only does the so-called "minor" right cerebral hemisphere have its own communications potential, but its integrity may also be essential to maintain the interface between the meanings to be transmitted through communication (the semantics) and the forms (words and speech) in which those meanings are incorporated.

Other members of the team are: Drs. Yves Joanette, Jean-Luc Nespoulous, Isabelle Peretz and John Ryalls, all of the University of Montreal; Daniel Bub of McGill University and Eric Keller, University of Quebec at Montreal. The Research Centre of the Côte-des-Neiges Hospital Centre is an affiliate of the University of Montreal.

Memory, Behaviour Among Brain Functions Probed at Clinical Research Institute of Montreal

New insights into important brain functions including behaviour and memory are being sought by a team of researchers at the Clinical Research Institute of Montreal.

Dr. Nabil Seidah is directing a team that is probing the importance of specific proteins in brain function and their work could lead to useful clinical applications in the future. The team hopes to obtain information about the diversity, expression, processing and function of neural and neuroendocrine proteins found among the myriad brain molecules that act in harmony through the circuitry of the billions of neuronal cells in the brain.

These proteins, according to Dr. Seidah, include convertases, which are enzymes that convert precursor proteins into active products, as well as secretory and transcriptional factors associated with the functioning of neuronal cells.

Earlier, Dr. Seidah's team isolated and obtained the chemical components of a serine protease substance called IRCM-SP1, which breaks up many pro-peptides to release a number of important brain hormones including ACTH, β-endorphin, the enkephalins, somatostatin, atrial natriuretic factor (ANF), dynorphins and insulin.

"We suspect that the brain needs hundreds of thousands of different chemicals to carry on the multiplicity of simultaneous reactions it has to perform," says Dr. Seidah, adding the enzymatic system his team has unravelled is possibly a key element in understanding how the brain is able to produce all these molecules. Overall, the team hopes to purify and characterize the enzymes in the brain responsible for the synthesis of thousands of molecules, to discover new brain substances, to evaluate their role as so-called neuromodulators or neurotransmitters and to decipher their genetic code.

Other members of the research unit include Drs. Michel Chrétien, Claude Lazure, Majambu Mbikay and Vincent Castellucci.

Probe of Peptides at INRS-Santé Could Aid Attack on Nervous System Disorders

Improved approaches to the treatment of a number of central and peripheral nervous system disorders could emerge from research being carried out by a team of scientists from Institut national de la recherche scientifique (INRS-Santé), McGill University and the University of Sherbrooke.

The group is probing the mechanism of action of two unique families of peptides. The families, neuropeptide-tyrosine (NPY) and calcitonin gene-related peptides (CGRP) are among the most abundant regulatory peptides found in mammals. NPY is the most abundant neuropeptide found in the heart

This reverse phase chromatography column is used for peptide purification. (Photographic Services — INRS.)

and brain and is also the most powerful stimulant of food intake seen so far in animal models. As a vasodilator or agent for opening blood vessels, CGRP is the most potent ever tested in animals and man. It is also an effective substance for relieving nociceptive pain caused by action of pain-sensitive nerve fibres. NPY and CGRP are involved in appetite control, memory, brain and peripheral circulation, etc.

Another component of the research program is characterizing the receptor sites of the peptides in brain and peripheral tissues of mammals. This project involves Drs. Serge St. Pierre and Alain Fournier at INRS-Santé, University of Quebec; Dr. Rémi Quirion of the Douglas Research Centre of McGill University and Drs. Alain Cadieux and François Jolicoeur of the Faculty of Medicine, University of Sherbrooke.

Besides new insights into these peptide families, the research could lead to better strategies for treatment of CNS and peripheral nervous system disorders.

Over the past decade, many peptides have been isolated and scientists believe many more remain to be discovered. However, little is known about the precise biological roles of many of them.

Improved Joint Implants for Arthritics Being Developed by Queen's University Team

Victims of severe forms of crippling joint-destroying arthritis may benefit from research on new artificial joints being carried out at Queen's University.

There, a team of scientists in the Clinical Mechanics Group, under the chairmanship of Prof. Henk Wevers, has been studying the mechanism behind the bone destruction that occurs in the disease and designing new, and hopefully, longer-lasting implant devices aimed at improved rehabilitation.

"Arthritic diseases cause suffering and incapacitation, and place a major burden on our health care system for the chronic services that the patients require," says Dr. Derek Cooke, orthopedic surgeon and a founding member of the team. He notes that osteoarthritis is the most common form of arthritis, often leading to total destruction of joints. Problems with existing models include limited flexion of the knee, poor bonding to natural tissue and limited life of about a decade for the implant.

Leg alignment studies of an arthritic patient using a Questor Precision Radiographic Frame give information on degree of abnormality prior to possible surgery or knee joint implant.

The Clinical Mechanics Group feels that geometry and alignment of the lower limb bone may contribute to osteoarthritis by inducing uneven loads and stresses in the knee joint, in turn causing accelerated wear of the bearing surfaces. It is testing this hypothesis by comparing patterns of knee alignment during both stance and motion in normal volunteers and in patients with osteoarthritis.

The MRC-funded research has already set the stage for expansion into direct technology transfer. A prototype knee implant, developed by the team and made of titanium and high density polyethylene incorporating anatomically correct features, has attracted the interest of a Swiss orthopedic device company. Ultimately, the team hopes to see Canadian-designed implants manufactured in Canada for the North American market.

A prospective trial is underway comparing two different designs of total knee replacement, one where the natural posterior cruciate ligament has been retained and the other where it has been removed.

The studies are examining the benefit for patient treatment function in gait and stair climbing, and may point the way for design improvements with advantages for and against retention of the cruciate ligament. Several U.S. surgical manufacturing companies have begun working with the team and provided some grant support as well.

The long term aim of the research is better designs of artificial joints by duplicating the distribution of loads and stresses that occurs in a well-aligned natural knee.

Other members of the group are: Mechanical Engineering professors Timothy Bryant, Carolyn Small and Urs Wyss; Orthopedic surgeons David Pichora, John Rudan and Charles Sorbie; Professor of Rehabilitation Therapy Sandra Olney; and Senior Biostatistician/Epidemiologist Benny Zee.

Improved Psychiatric Drug Therapy Quest of University of Saskatchewan Team

Investigations that could lead to more effective and accurate use of psychiatry drugs are being carried out by a team of scientists at the University of Saskatchewan.

The team, headed by Dr. Kamal Midha and comprising members from the Colleges of pharmacy and of medicine, is conducting studies on several planes to obtain new information on effective dosages, new products of metabolism of psychotropics as well as the rates of drug metabolism and the mechanism of production of various metabolites of drugs.

In one project, they are making important contributions to a growing body of evidence which suggests that many schizophrenic patients actually benefit from a controlled reduction in the dose of their neuroleptic medication. In many cases, says the director, the occasional relapse with its worsening of schizophrenic symptoms may be brought under control by a temporary increase in dosage. One of the most important benefits of lower doses is a reduction in the intensity of unpleasant side effects which are a problem with many neuroleptic drugs.

In recent studies, the team has discovered several important products of the metabolism of psychotropic drugs in the body. Studies to evaluate the importance of these previously unknown metabolites are underway. A major problem, explains Dr. Midha, is that many psychotropic drugs are converted into a host of metabolites, some of which contribute to the therapeutic action of the drug while others contribute to its side effects. Moreover, the rate and extent of metabolism vary greatly from individual to individual and even vary depending on the route of administration of the drug.

The team has begun a series of experiments involving the use of custom synthesized drugs labelled with harmless non-radioactive isotopes. Out of this work, it hopes to gain new insights into the rates of drug metabolism in patients and also on the mechanism of production of various metabolites.

The scientists are also investigating the relationships between blood concentrations of methylphenidate and clinical response in children with attention-deficit hyperactivity disorder. A tablet of methylphenidate contains two forms of the drug and studies to date suggest that the less active form is metabolized rapidly so that concentrations of the more active form of the drug in the blood are invariably higher than those of the less active form. Further, after administration, the drug seems to reach the brain rapidly, leading to a rapid

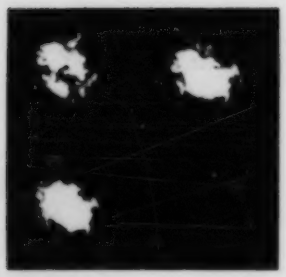
onset of therapeutic action. Evidence was also found to suggest that the slow release form of the drug should not be prescribed for children who chew their tablets because chewing destroys the slow release property and could result in unwanted side effects.

Other members of the research team include: Drs. Edward Hawes, Gordon McKay, John Hubbard and Elarien Korchinski. The team is also collaborating with researchers at the Royal University Hospital in Saskatoon, University of Calgary, University of California at Los Angeles, Camarillo State Hospital, California and Johns Hopkins University.

Treatment, Prevention of Kidney-Threatening Toxin Goal of Hospital for Sick Children Scientists

New findings that could pave the way toward better diagnosis, treatment and possibly prevention of the leading cause of kidney failure in infants and children could emerge from studies underway at the Research Institute of the Hospital for Sick Children.

A team of scientists headed by Dr. Mohamed Karmali and including Drs. J.L. Brunton, a molecular biologist and C.A. Lingwood, a biochemist, is studying the pathogenesis of verotoxin-producing Escherichia coli (VTEC) and their involvement in disease, particularly hemorrhagic colitis and the hemolytic uremic syndrome (HUS), the leading cause of pediatric renal failure.



Binding of fluorescent verotoxin to cell surface glycolipid receptors on human B cell prior to internalization; reconstructed image after confocal microscopy.

Their studies, being carried out in collaboration with the Department of Microbiology at the University of Toronto, are especially concerned with the role and mechanism of action of verotoxin, whether knowledge of its mechanism of binding to sensitive cells can be used clinically and whether the immune response to this toxin plays a role in the course of the disease.

There are no known ways of treating or preventing VTEC-associated illness and little is known about its pathogenesis. Earlier in their investigations, the team was instrumental in establishing the etiological relationship of VTEC to HUS and suggested that the toxin itself was of direct significance in the development of the disease.

HUS is particularly prevalent in children following VTEC infection and the team is studying the subcellular location and precise structure of the verotoxin receptor in children as opposed to adult kidney tissue. The team has also developed clinical receptor binding assays sufficiently sensitive to allow epidemiological studies of these infections. Central to these studies is the team's demonstration that verotoxin binds specifically to the glycolipid globotriaosyl ceramide, a plasma membrane component found in sensitive cells.

The verotoxins comprise a family of closely related subunit proteins containing five receptor binding B-subunits and one A-subunit which is responsible for inhibition of protein synthesis within the cell. The members of this toxin family bind to related, but different glycolipid species. By comparison of the amino acid sequence and receptor binding specificity the team has targeted particular amino acids within B-subunits which may be involved in the binding specificity. They have been able to change the receptor binding specificity of these toxins by changing these amino acids and are examining the effect of the change on the pathogenesis observed in cell culture and in animal models of disease.

These mutant toxins and their wild type counterparts are being purified in order to study the structure, particularly of the B-subunit and how

the receptor binding is accommodated. The ability of mutants in which the receptor binding has been deleted to serve as vaccines to prevent verotoxin-induced pathogenesis will also be studied.

The toxin is being used as a probe for the receptor function in normal cell physiology, particularly growth control of cells in culture and the development of human immune cells. Cells of the immune system are highly susceptible to the toxin in vitro and perhaps in vivo. The team is therefore studying the role of the receptor in the development of an immune response.

Prematurity, Fetal Growth and Development Studied by Researchers at Two Toronto Centres

New methods of preventing premature birth and providing greater insight into fetal growth and development are among the objectives of a major research project involving scientists at two Toronto centres.

The studies are being conducted by a team of investigators under the leadership of Dr. Stephen Lye of the Samuel Lunenfeld Research Institute of Mount Sinai Hospital. The team includes basic and clinical scientists from the institute and the Toronto General Hospital, both of which are affiliated with the University of Toronto.

A 30-week-old premature infant under treatment in the neonatal intensive care unit.

They are investigating the growth and development of critical organ systems in the fetus and newborn to determine the factors which prepare the fetus for life outside the mother's womb. They also hope to develop new methods for prevention of preterm delivery, one of the major remaining problems of pregnancy today. While only about five to eight per cent of pregnancies involve prematurity, they account for nearly 85 per cent of all neonatal morbidity and mortality.

"Fetal development and birth represent the most hazardous period of our lives," says Dr. Lye, who is director of the Division of Perinatology at the Institute.

Restricted growth of the fetus, premature birth, inadequate or abnormal development of the central nervous system, failure to establish normal respiratory function and failure to make appropriate cardiovascular adjustments at birth all can cause severe impairment or death.

The researchers will be investigating these developmental problems as well as the profound adjustments that must be made by the newborn infant to adapt to life outside the uterus.

The team comprises an integrated group of clinicians and scientists from the departments of obstetrics and gynecology, pediatrics and pathology. The multidisciplinary members specialize in development of respiratory, circulatory, central nervous and hormonal systems.

Scientists Probing Myelin at Toronto Institutions

New insights into how myelin, the insulation membrane which surrounds nerve fibres, develops and how its breaking down (as occurs in multiple sclerosis) might be prevented, are the focus of two research programs at the Samuel Lunenfeld Research Institute and the Hospital for Sick Children (HSC) in Toronto.

A team of scientists including Dr. Arthur Roach at Lunenfeld and Mario Moscarello at HSC, have combined their programs coordinated by Dr. John Roder of the Lunenfeld Institute to elucidate the structure of the myelin membrane in normal and diseased brain.

Drs. Arthur Roach, left and Dr. John Roder study an x-ray image for the detection of anti-sense mRNA from a mutant mouse.

The studies by the three teams are complementary. They include: examining the influence of genetic factors on myelin formation through the study of mutant mouse systems in which the process of myelination is interfered with; investigating the mechanism through which the myelin membrane adheres to and associates with the nerve fibre by studying the effects of changes in one of the myelin proteins (MAG, an adhesion molecule); and studies of the mechanisms involved in the assembly of the different myelin proteins into the membrane and how their interactions stabilize the myelin structure.

The genes for the three major myelin proteins of the brain — proteolipid protein (PLP), myelin basic protein (MBP) and myelin associated glycoprotein (MAG) have been cloned. Gene transfer experiments into animals are underway to determine how changes in the genes of the different proteins affect the chemistry of the myelin proteins and how these specific changes affect the final structure of the myelin sheath. Myelin, a fatty substance comprised of glial cell membranes, is essential for the proper functioning of the nervous system where it facilitates the flow of nerve impulses over long distances such as in the control of muscles by nerve cells in the brain or in the rapid relay of information from the senses to the brain. It was the appearance of myelin during evolution that made possible the development of complex nervous systems such as those of humans.

In a number of diseases like multiple sclerosis and amyotrophic lateral sclerosis or Lou Gehrig's diseases there is a disruption of the normal structure and function of the myelin sheath which results in severe debilitation and eventual death.

The scientists have found new evidence to show that there is some attempt by the body to remyelinate even in the face of massive focal demyelination in the brains of MS patients. According to Dr. Roder, further investigations in this area may show why there is inefficient remyelination and suggest ways of enhancing it.

Toronto Team Seeks New Drugs, Better Tests For Early Stage Psychomotor Diseases

New drug therapy along with more accurate diagnostic tests for patients in the early stages of certain psychomotor diseases such as Parkinson's and Alzheimer's diseases could emerge from investigations underway at the University of Toronto.

There, a team coordinated by Dr. Philip Seeman has isolated two genes that produce dopamine receptor proteins, which when stimulated, are thought to cause hallucinations. Disturbances and diseases of thought and movement are associated with abnormal dopamine pathways in the brain. For instance, the rigidity found in Parkinson's disease stems from an absence of dopamine while the hallucinations and delusions which occur in schizophrenia, Alzheimer's disease or Huntington's chorea are associated with an overactive dopamine system, since dopamine-receptor-blocking drugs alleviate the problem.

It was in Dr. Seeman's laboratories that this dopamine receptor basis of antipsychotic drug action, as well as an elevated amount of brain dopamine receptors in schizophrenia were first discovered.

The team has now cloned the gene for the dopamine D1 receptor and has discovered and cloned genes for two new dopamine receptors, D4 and D5.

This has recently been published in the British science journal *Nature*. A search is now underway for abnormalities in these genes in schizophrenia as well as in addiction disorders since drugs such as cocaine and alcohol act by releasing dopamine which in turn stimulates dopamine receptors.

The researchers have early evidence for an interaction between two different types of dopamine receptors in the same cell. Further, they have found that this interaction or "receptor link" occurs in post-mortem human brain tissue from neurologically normal individuals but not in tissues from patients dying with a psychosis.

"It may be possible to develop new medications using these newly cloned genes for dopamine receptors," says Dr. Seeman. For example, the new D4 receptor is uniquely sensitive to clozapine, an antipsychotic agent. This, he said, explains the low dosage at which this drug blocks hallucinations and delusions.

Clozapine is the only antipsychotic drug which does not produce tardive dyskinesia or abnormal face and body motion. However, the drug can be harmful in up to 10 per cent of patients who develop a low white blood cell count. The team believes the discovery of the D4 receptor will make possible a search for safer clozapine-related drugs.

Other members of the Toronto team include Drs. Hyman Niznik, Hubert Van Tol, Brian O'Dowd and Susan George.

Cause, Prevention of Neonatal Lung Disease Goal of Hospital For Sick Children Scientists

Neonatal lung disease, a potentially life-threatening disorder in premature infants, may one day be preventable with a vaccine if research underway at the Hospital for Sick Children is successful.

A team of scientists directed by Dr. Barry Smith, head of Newborn Medicine at the hospital, is studying the development of the fetal lung and the changes it must undergo before, and at the time of birth, in order to take over gas exchange from the mother and the placenta.

According to Dr. Smith, adaptation of the fetal lung to air breathing and the commensurate changes in ventilation, epithelial fluid transport and pulmonary circulation are perhaps the most critical of all the transitions which must occur at the time of birth.

"This is reflected in neonatal mortality and morbidity figures which indicate that respiratory disorders are a leading cause of death and of physiological derangements which lead to long term morbidity," he says. That these disorders are even more prominent among prematurely born infants reflects the importance of growth and differentiation in the fetal period to the ultimate success of perinatal pulmonary adaptation.

A neonatal transport team arrives atop Toronto's Hospital for Sick Children with a premature infant following an emergency flight.

The team, which functions from within the hospital's research institute giving it ready opportunity for interaction with other researchers, hopes to develop and apply biological treatments to replace presently used expensive and, at times, risky technological life support approaches, according to the director. One such biological approach available today is the use of surfactant, a substance missing in premature lungs, to improve the stability of premature infants. The substance is also used to stabilize premature infants during their helicopter flight from a referring hospital to the Hospital for Sick Children by a Neonatal Transport Team.

Dr. Smith points out that in the 1950s, poliomyelitis was a disease treated by technological approaches, specifically the iron lung, but it was biology, the polio vaccine, that eventually conquered the disease. "The research team hopes that the same will hold true for neonatal lung disease."

The HSC team collaborates closely with another MRC funded program in Perinatal Biology at the Samuel Lunenfeld Research Institute at Mount Sinai Hospital under the leadership of Dr. Stephen Lye.

Dr. Smith's team comprises Dr. Hugh O'Brodovich, a pediatric lung specialist; Dr. Martin Post, a basic scientist; Dr. Ernest Cutz, a pathologist and Dr. Keith Tanswell, a specialist in newborn medicine.

University of Western Ontario Team Aiming for Schistosomiasis Vaccine

Development of a vaccine against schistosomiasis, a disease that afflicts an estimated 300 million people, is the objective of a research project underway at the University of Western Ontario.

Dr. Ronald Podesta, a professor of zoology, is heading a team that is attempting to develop a protective vaccine against the disease which ranks second only to malaria among the major parasitic diseases of humans.

Schistosomiasis is caused by several species of blood flukes and is spread in infected water containing larvae from certain types of snails. It is endemic in the Orient, Africa, Cyprus, some Caribbean islands, South America and the Near East.

According to Dr. Podesta, although other factors may be used to control the disease, vaccination remains the most economical approach to combatting it and the availability of modern tools of molecular biology have made the possibility of a vaccine a realistic objective.

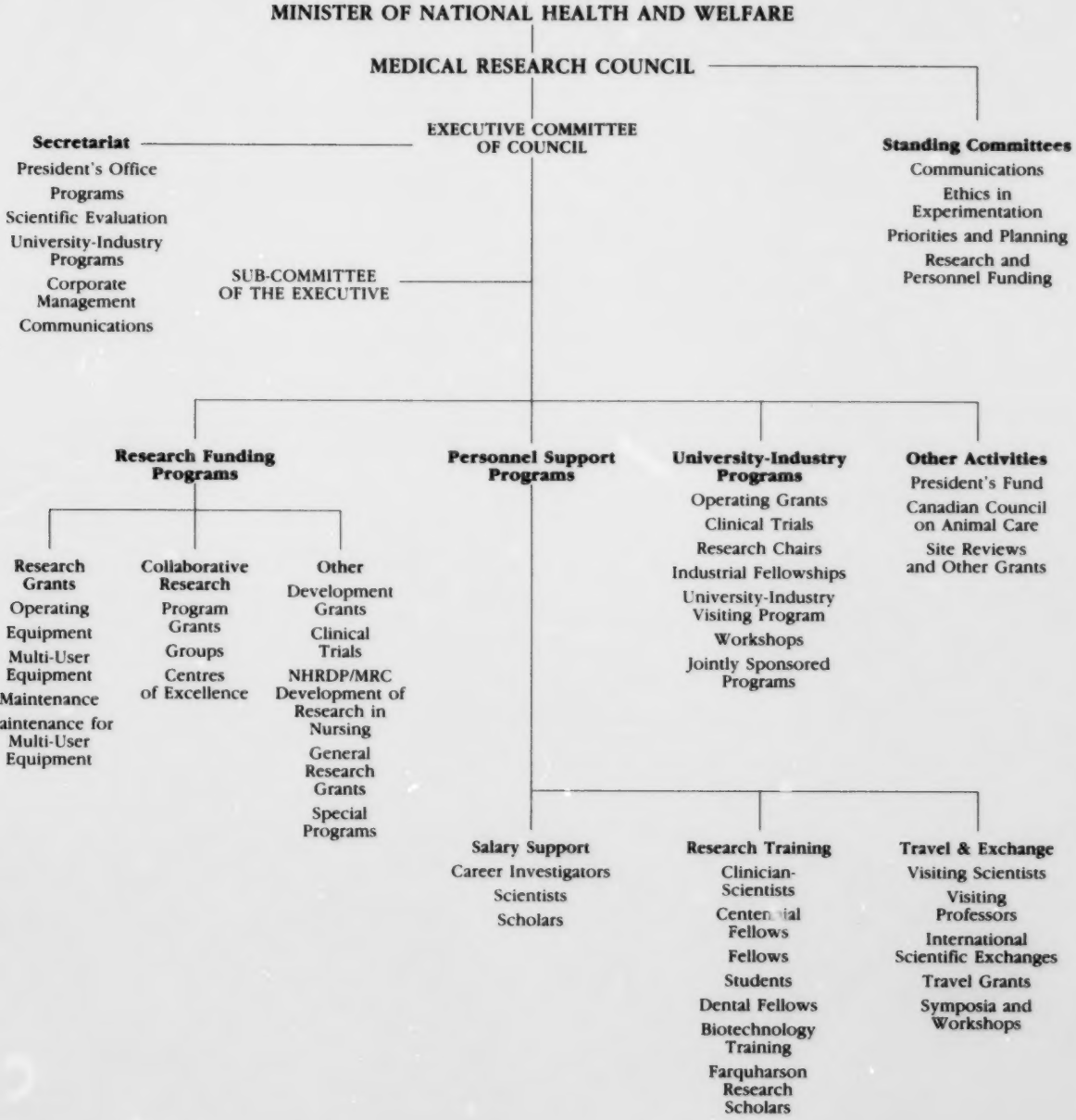
The team has cloned two schistosome genes encoding for surface proteins which contribute to the parasite's ability to resist being killed by the host's defence system. These genes will form the basis of their studies designed to construct a schistosome vaccine.

The proteins encoded by the two genes will be expressed in bacteria, insect and mammalian cell lines in order to obtain enough material for vaccination studies and to map parts of the proteins that stimulate specific immune responses.

A synthetic vaccine will be developed and the schistosome genes will be incorporated into vaccinia virus as a vehicle for delivery of the vaccine.

Other members of the research team are: Drs. Gill Strejan, Gregory Dekaban and Michael Clarke.

MRC ORGANIZATION CHART



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As of March 31, 1991

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1. Report of the President (annual).
2. Grants and Awards Guide (annual).
3. University-Industry Grants and Awards Guide (annual).
4. List of (holders of) MRC Grants & Awards (annual).
5. Directory of MRC Fellows (annual).
6. Guidelines on Research Involving Human Subjects (1987).
7. Guidelines for Research on Somatic Cell Gene Therapy in humans (1990)
8. Proceedings of the International Summit Conference on Bioethics, Ottawa, 1987: Towards an International Ethic for Research with Human Beings.
9. Health and Welfare Canada and MRC Laboratory Biosafety Guidelines (available from the Office of Biosafety, Laboratory Centre for Disease Control Health and Welfare Canada, Ottawa, Ontario, K1A 0L2, tel. (613) 957-1779)
10. MRC Newsletter (quarterly). Includes University-Industry Bulletin.
11. Reference List of Health Science Research in Canada (annual) (limited circulation).
12. Terminology Series (English-French, French-English vocabularies; joint project of MRC and of the Department of the Secretary of State of Canada)
    (a) Enzyme Engineering (March 1989, 753 pages) (free from the Medical Research Council)
    (b) Genetic Engineering (1990, 328 pages) ($25)
    (c) Medical Signs and Symptoms (1990, 426 pages) ($27)
    (d) Signs and Symptoms of the Musculoskeletal System Volume I: Clinical Findings (1990, 528 pages) ($29.95)
    (Available in Canada through Associated Bookstores and other booksellers or by mail from Canadian Government Publishing Centre, Supply and Services Canada, Ottawa, Canada K1A 0S9)
13. No Greater Challenge: Solving the Mysteries — AIDS
14. Secrets of the Heart: Cardiovascular Research
15. Decisions

Medical Research Council
Number of Grants and Awards
1989–90 and 1990–91

Programs	1989–90		1990–91				
	Grants and Awards		Number of Grants and Awards			Total	
	Number	Amount $(000)	Continuing	Renewals	New	Number	Amount $(000)
RESEARCH FUNDING PROGRAMS							
RESEARCH GRANTS							
Operating	2,093	128,144	1,209	651	257	2,117	134,087
Equipment	19	1,118	1	—	93	94	5,476
COLLABORATIVE RESEARCH							
Program Grants	33	10,693	25	6	9	40	11,841
MRC Groups	11	14,054	9	2	2	13	14,058
Centres of Excellence	2	400	—	—	5	5	19,875
Development Grants	81	4,115	65	—	12	77	4,152
Special Programs	12	874	4	3	7	14	1,656
General Research Grants	39	1,125	—	—	39	39	1,125
	2,290	160,523	1,313	662	424	2,399	192,270
UNIVERSITY-INDUSTRY PROGRAMS							
Collaborative Research		4,021	52	3	24	79	4,824
Awards		442	20	2	109	131	922
	85	4,463	72	5	133	210	5,746
PERSONNEL SUPPORT PROGRAMS							
SALARY SUPPORT							
Career Investigators	45	3,153	37	4	—	41	3,179
MRC Scientists	50	2,382	41	—	7	48	2,571
Scholarships	131	5,515	95	—	38	133	6,798
RESEARCH TRAINING							
Clinician-Scientists	8	251	8	—	9	17	682
Centennial Fellowships	35	1,154	22	—	9	31	1,162
Fellowships	453	11,294	218	94	172	484	13,262
Studentships	484	5,124	163	197	168	528	5,829
Dental Fellowships	7	241	4	2	2	8	252
Biotechnology Training & Retraining	27	285	11	2	—	13	128
Farquharson Research Scholarships	284	1,002	—	—	279	279	1,022
TRAVEL & EXCHANGE							
Visiting Scientists	38	292	4	—	32	36	404
Visiting Professorships	24	28	—	—	20	20	19
Travel Grants, Symposia & Workshops	38	284	—	—	42	42	221
	1,622	31,005	603	299	778	1,680	35,529
OTHER ACTIVITIES							
President's Fund	39	213	—	—	34	34	169
Canadian Council on Animal Care	1	469	1	—	—	1	500
Site Reviews & Other Grants	48	666	7	—	50	57	1,207
	88	1,348	6	0	86	92	1,876
GRAND TOTAL	4,085	197,339	1,994	966	1,421	4,381	235,421

Medical Research Council
Expenditures by University and MRC Program 1990–91
in thousands of dollars

	RESEARCH FUNDING PROGRAMS								UNIVERSITY INDUSTRY PROGRAMS
	RESEARCH GRANTS		COLLABORATIVE RESEARCH						
	Operating	Equipment	Program Grants	MRC Groups	Centres of Excellence	Development Grants[1]	Special Programs	General Research Grants	
BRITISH COLUMBIA									
British Columbia	10,694	195	1,656	801	9,958	260	117	80	579
Simon Fraser	52	—	—	—	—	—	—	—	—
Victoria	191	99	—	—	—	—	—	—	—
ALBERTA									
Alberta	8,254	168	1,028	2,306	—	97	12	80	345
Alberta Cancer Board	—	—	—	—	—	—	—	—	165
Calgary	6,736	53	479	—	—	14	—	50	248
Lethbridge	59	—	—	—	—	—	—	—	—
SASKATCHEWAN									
Saskatchewan	2,289	54	300	—	—	730	—	90	37
Regina	38	—	—	—	—	—	—	—	—
MANITOBA									
Manitoba	6,398	150	—	1,283	—	—	635	80	27
ONTARIO									
Carleton	191	—	—	—	—	—	—	—	—
Guelph	734	—	—	—	—	—	—	10	18
McMaster	7,138	347	591	—	—	—	29	50	708
Ottawa	4,357	80	109	—	—	288	69	50	85
Queen's	4,802	195	200	630	—	371	—	50	115
Toronto	28,080	910	2,204	2,332	—	386	—	80	857
Trent	41	—	—	—	—	—	—	—	—
Waterloo	338	—	—	—	—	—	—	—	—
Western Ontario	7,656	102	287	1,652	—	63	—	65	366
Windsor	—	—	—	—	—	—	—	—	—
York	220	—	—	—	—	—	—	—	—
QUEBEC									
Concordia	297	—	—	—	—	—	—	—	53
Laval	4,612	349	66	1,246	—	386	56	80	142
McGill	19,933	1,236	938	1,300	9,917	50	617	65	509
Montréal	11,228	893	2,903	1,701	—	606	19	90	1,097
U. du Québec	423	111	294	—	—	—	102	—	—
Sherbrooke	3,267	442	—	807	—	201	—	50	122
NEW BRUNSWICK									
New Brunswick	66	—	—	—	—	—	—	—	—
PRINCE EDWARD ISLAND									
Prince Edward Island	102	—	—	—	—	—	—	10	—
NOVA SCOTIA									
Dalhousie	4,057	69	786	—	—	407	—	80	190
NEWFOUNDLAND									
Memorial	1,834	23	—	—	—	293	—	65	3
OTHERS	—	—	—	—	—	—	—	—	—
OUTSIDE CANADA	—	—	—	—	—	—	—	—	82
GRAND TOTAL	134,087	5,476	11,841	14,058	19,875	4,152	1,656	1,125	5,746

[1] Includes Nursing Research Awards ($180)
[2] Includes Dental Fellowships ($252); Centennial Fellowships ($1,162)

PERSONNEL SUPPORT PROGRAMS									OTHER ACTIVITIES[4]	TOTAL
SALARY SUPPORT			RESEARCH TRAINING					TRAVEL & EXCHANGE PROGRAMS[3]		
Careers Investigators	MRC Scientists	Scholars	Clinician-Scientists	Fellows[2]	Students	Biotechnology Training Centres	Farquharson Research Scholarships			
346	234	796	—	819	759	30	109	49	13	27,495
—	—	—	—	—	72	—	—	—	—	124
—	—	—	—	52	15	—	—	—	—	357
227	67	287	55	229	189	—	64	30	7	13,445
—	—	—	—	—	—	—	—	—	—	165
—	362	569	—	401	109	76	10	11	—	9,118
—	—	—	—	—	—	—	—	—	—	59
—	106	—	—	162	56	—	43	20	10	3,897
—	—	—	—	—	6	—	—	—	—	44
165	75	668	41	516	210	—	64	59	12	10,383
—	—	—	—	—	—	—	—	—	—	191
—	—	—	—	306	9	—	—	—	—	1,077
84	127	195	45	214	197	—	46	8	—	9,779
161	—	105	—	373	255	—	29	5	14	5,978
92	—	179	—	107	343	22	29	2	12	7,149
342	444	1,061	160	2,386	871	—	197	36	6	40,352
—	—	—	—	—	—	—	—	—	—	41
—	—	—	—	—	39	—	—	8	—	385
346	124	340	—	222	440	—	61	22	8	11,754
—	—	—	—	—	1	—	—	—	—	1
—	—	—	—	21	60	—	—	—	—	301
—	—	—	—	11	33	—	—	—	—	394
84	65	173	—	124	312	—	57	—	—	7,752
870	519	1,428	80	1,158	723	—	107	60	20	39,530
253	380	493	45	436	696	—	108	51	31	21,030
—	—	54	—	52	45	—	—	10	—	1,091
83	68	96	—	123	45	—	21	16	5	5,346
—	—	—	—	—	3	—	—	—	—	69
—	—	—	—	—	—	—	—	—	—	112
126	—	201	—	111	102	—	50	59	10	6,248
—	—	153	—	33	18	—	21	5	—	2,448
—	—	—	—	—	—	—	6	193	1,238	1,437
—	—	—	256	6,820	221	—	—	—	490	7,869
3,179	2,571	6,798	682	14,676	5,829	128	1,022	644	1,876	235,421

[3] Includes Visiting Scientists ($404); Visiting Professorships ($19); Travel Grants ($28); Workshops and Symposia ($193)
[4] Includes President's Fund ($169); Site Visits and Other Grants ($1,207); Canadian Council on Animal Care ($500)

Medical Research Council
Expenditures by MRC Program, 1988–89 to 1990–91
and Category of Support in 1990–91
in thousands of dollars

	EXPENDITURES			1990–91 CATEGORY OF SUPPORT				
	1988–89	1989–90	1990–91	Operating	Equipment	Salary, Benefits & Stipends	Research Allowances	Travel, Honoraria & Other
RESEARCH FUNDING PROGRAMS								
RESEARCH GRANTS								
Operating	119,515	128,144	134,087	130,705	3,384	—	—	—
Equipment	2,504	1,118	5,476	—	5,476	—	—	—
COLLABORATIVE RESEARCH								
Program Grants	10,285	10,693	11,841	11,831	10	—	—	—
MRC Groups	11,817	14,054	14,058	10,821	762	2,475	—	—
Centres of Excellence	—	400	19,875	19,875	—	—	—	—
Development Grants	4,699	4,115	4,152	642	271	3,191	48	—
Special Programs	1,105	874	1,656	1,549	—	—	—	107
General Research Grants	1,125	1,125	1,125	1,125	—	—	—	—
	151,048	160,523	192,270	176,546	9,903	5,666	48	107
UNIVERSITY-INDUSTRY PROGRAMS								
Collaborative Research	2,412	4,021	4,824	4,442	382	—	—	—
Awards	158	442	922	—	—	904	10	8
	2,570	4,463	5,746	4,442	382	904	10	8
PERSONNEL SUPPORT PROGRAMS								
SALARY SUPPORT								
Career Investigators	3,243	3,153	3,179	—	—	3,179	—	—
MRC Scientists	2,354	2,382	2,571	—	—	2,571	—	—
Scholarships	5,075	5,515	6,798	—	—	6,258	540	—
RESEARCH TRAINING								
Clinician-Scientists	—	251	682	—	—	622	57	3
Centennial Fellowships	961	1,154	1,162	—	—	1,062	94	6
Fellowships	10,867	11,294	13,262	—	—	12,635	540	87
Studentships	4,584	5,124	5,829	—	—	5,665	160	4
Dental Fellowships	230	241	252	—	—	244	7	1
Biotechnology Training & Retraining	555	285	128	—	—	116	12	—
Farquharson Research Scholarships	946	1,002	1,022	—	—	1,022	—	—
TRAVEL & EXCHANGE								
Visiting Scientists	264	292	404	—	—	—	34	370
Visiting Professorships	13	28	19	—	—	—	—	19
Travel Grants, Symposia & Workshops	241	284	221	—	—	—	—	221
	29,333	31,005	35,529	—	—	33,374	1,444	711
OTHER ACTIVITIES								
President's Fund	184	213	169	—	—	—	—	169
Canadian Council on Animal Care	427	469	500	—	—	—	—	500
Site Reviews & Other Grants	298	666	1,207	—	—	—	—	1,207
	909	1,348	1,876	—	—	—	—	1,876
TOTAL OF ALL PROGRAMS	183,860	197,339	235,421	180,988	10,285	39,944	1,502	2,702
PERCENTAGE OF 1990–91 TOTAL				76.9%	4.4%	17.0%	0.6%	1.1%

Medical Research Council
Distribution of MRC Expenditures by Province
1987–88 to 1990–91

PROVINCE	1987–88		1988–89		1989–90		1990–91	
	$(000)	%	$(000)	%	$(000)	%	$(000)	%
British Columbia	13,890	8.1	14,797	8.0	16,802	8.5	27,976	11.9
Alberta	13,952	8.2	16,202	8.8	20,657	10.5	22,787	9.7
Saskatchewan	3,970	2.3	4,293	2.3	3,795	1.9	3,941	1.7
Manitoba	8,783	5.2	9,302	5.1	9,568	4.9	10,383	4.4
Ontario	63,379	37.2	66,852	36.4	71,616	36.3	77,008	32.7
Québec	51,583	30.3	56,739	30.9	58,417	29.6	75,143	31.9
New Brunswick	14	<0.1	107	<0.1	90	<0.1	69	<0.1
Prince Edward Island	34	<0.1	10	<0.1	100	<0.1	112	<0.1
Nova Scotia	5,680	3.3	6,027	3.3	6,075	3.1	6,248	2.7
Newfoundland	1,899	1.1	1,863	1.0	2,295	1.2	2,448	1.0
Others	1,035	0.6	1,114	0.6	1,528	0.8	1,437	0.6
Outside Canada	6,248	3.7	6,554	3.6	6,396	3.2	7,869	3.3
TOTAL	170,467	100.0	183,860	100.0	197,339	100.0	235,421	100.0

Operating Grants by Area of Research

Classification	NUMBER OF GRANTS			Funding $(000)	Percentage of Total
	Research Grants	Program Grants	MRC Groups		
Bacteriology	62	2	—	4,736	2.9
Biochemistry and Molecular biology	232	3	2	22,580	14.1
Blood	57	—	—	4,316	2.7
Cancer	96	1	—	6,927	4.3
Cardiovascular	144	3	1	11,363	7.1
Cell Biology	77	—	—	6,116	3.8
Dental Science	28	2	1	4,216	2.6
Drug Research	78	2	—	5,476	3.4
Endocrinology	83	2	1	7,402	4.6
Gastrointestinal and Liver	75	2	1	7,111	4.4
Genetics	57	—	1	5,611	3.5
Hearing	8	—	—	352	0.2
Imaging and Nuclear Medicine	25	—	1	2,932	1.8
Immunology and Transplantation	94	2	1	8,099	5.0
Metabolism incl. Diabetes	88	—	—	6,617	4.1
Musculo-skeletal	64	2	—	4,232	2.6
Nephrology	38	—	1	3,642	2.3
Neurosciences	322	9	3	26,466	16.5
Nutrition	22	—	—	1,388	0.9
Reproductive incl. Pregnancy	65	2	1	7,752	4.8
Respiration	89	1	—	6,071	3.8
Virology	64	—	—	4,711	2.9
Vision	48	1	—	2,515	1.6
Not classified	2	—	—	44	0.0
TOTAL	1,918	34	14	160,675	100.0

Figures are as at June 13, 1991

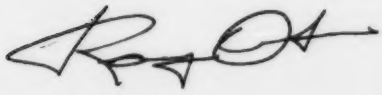
AUDITOR'S REPORT

To the Medical Research Council
and the Minister of National Health and Welfare

I have audited the statement of operations of the Medical Research Council for the year ended March 31, 1991. This financial statement is the responsibility of the Council's management. My responsibility is to express an opinion on this financial statement based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statement is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statement. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, this financial statement presents fairly, in all material aspects, the results of operations of the Council for the year ended March 31, 1991 in accordance with the accounting policies set out in Note 2 to the financial statement.



Raymond Dubois, FCA
Deputy Auditor General
for the Auditor General of Canada

Ottawa, Canada
June 14, 1991

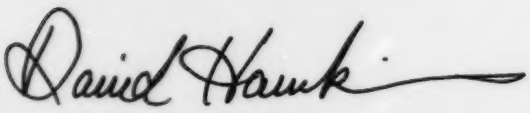
Medical Research Council Statement of Operations for the Year Ended March 31, 1991

(in thousands of dollars)

	1991	1990
EXPENDITURE		
Grants and scholarships (Schedule)		
Research funding programs	192,270	160,523
Personnel support programs	35,529	31,005
University-industry programs	5,746	4,463
Other activities	1,876	1,348
	235,421	197,339
Operations		
Salaries and employee benefits	2,752	2,009
Employee termination benefits	8	—
Travel (Note 6)	1,055	807
Professional and special services	449	362
Publications	275	320
Accommodation	205	243
Communications	189	180
Materials and supplies	146	102
Furniture and equipment	126	64
Equipment repair and maintenance	87	66
	5,292	4,153
Administration		
Salaries and employee benefits	1,044	908
Employee termination benefits	1	—
Professional and special services	131	90
Accommodation	92	54
Communications	72	81
Publications	66	31
Materials and supplies	55	46
Furniture and equipment	48	29
Equipment repair and maintenance	33	30
Travel (Note 6)	25	34
	1,567	1,303
	242,280	202,795
NON-TAX REVENUE		
Refunds of previous years' expenditure	147	279
NET COST OF OPERATIONS (NOTE 3)	242,133	202,516

The accompanying notes and schedule are an integral part of this statement.

Approved by Council:



D. Hawkins
Vice-President

Approved by Management:

A. Belliveau
Director, Corporate Management

Medical Research Council
Notes to the Statement of Operations
March 31, 1991

1. Authority and purpose

The Medical Research Council was established in 1969 by the Medical Research Council Act and is a departmental corporation named in Schedule II to the Financial Administration Act. The objective of the Council is to help attain the quality and scale of research in the health sciences essential to the maintenance and improvement of health services. The Council's operating and grants expenditures are funded by a budgetary lapsing authority. Employee benefits are authorized by a statutory authority.

2. Significant accounting policies

The financial statement has been prepared using the following accounting policies:

(a) Expenditure recognition

Grants and scholarships are charged to expenditure when disbursed. All operating expenditure is recorded on the accrual basis, with the exception of termination benefits and vacation pay which are recorded on the cash basis. This practice is in accordance with the government's accounting policy.

(b) Capital purchases

Acquisitions of capital assets are charged to operating expenditure in the year of purchase.

(c) Services provided without charge by government departments

Estimates of amounts for services provided without charge by government departments are included in expenditure.

(d) Refunds of previous years' expenditure

Refunds of previous years' expenditure are recorded as revenue when received and are not deducted from expenditure.

(e) Contributions to the Public Service Superannuation Plan

Employees participate in the Public Service Superannuation Plan administered by the Government of Canada. The employees and the Council contribute equally to the cost of the Plan. Contributions by the Council are charged to expenditure on a current basis.

3. Parliamentary appropriations

(in thousands of dollars)

	1991	1990
Department of National Health and Welfare		
Vote 35 — Grants	235,421	197,346
lapsed	—	7
	235,421	197,339
Vote 30 — Operating expenditure	6,037	4,726
lapsed	63	11
	5,974	4,715
Statutory contributions to employee benefit plans	467	370
Total use of appropriations	241,862	202,424
Add: services provided without charge by government departments	418	371
Less: non-tax revenue	147	279
Net cost of operations	242,133	202,516

4. Trust funds

As provided for in Section 4(3) of the Medical Research Council Act, the Council administers a number of trust funds separately from the activities funded through parliamentary appropriations. The purpose and accounting for these funds is described below. The balance of these funds is represented by deposit with the Receiver General for Canada.

(a) In 1974, the Council received $75,000 from an anonymous donor to establish a fund. The interest received is used for the payment of grants for research in the fields of dyskinesia and torticollis. Other donations received in prior years not earmarked for specific projects have also been credited to this fund.

(b) In 1985, the Council received a distinguished award entitled "The St. Boniface General Hospital Research Foundation Award" which included an amount of $20,000. In recognition of the importance of the award, the Council, in agreement with the Foundation, decided to use the monetary portion of the award to establish a trust fund from which it could provide summer research scholarships to encourage graduate high school students, first year pre-med students and first and second year medical students to become involved in biomedical research. These awards are called "Farquharson Research Scholarships". The last award was paid in 1991, and the fund has now been closed.

(c) In February 1986 the Federal Government announced, as part of a new "Matching Policy", that private sector contributors who wish to provide funds for medical research can channel their money either through universities or through the Medical Research Council. When the Council receives such monies, they must be placed in trust and disbursed in accordance with agreements between the contributor and the Council.

The transactions relating to these three funds are as follows:

	Dyskinesia & Torticollis		Farquharson Research Scholarships		Donations for Research	
	1991	1990	1991	1990	1991	1990
	$	$	$	$	$	$
Balance:						
— Beginning of year	92,353	83,056	66	3,479	635,046	321,157
Add:						
— Donations received	—	—	—	—	1,436,843	988,990
— Interest received	10,543	9,297	—	67	88,339	43,132
Less:						
— Grants paid	—	—	66	3,480	1,347,782	718,233
Balance:						
— End of year	102,896	92,353	—	66	812,446	635,046

5. Commitments

The Council is committed to disburse grants and scholarships in future years subject to the provision of funds by Parliament. Future year commitments are as follows:

Year of payment	1991	1990
	(in thousands of dollars)	
1990–91	—	198,130
1991–92	238,895	143,635
1992–93	170,881	89,443
1993–94	105,659	43,264
1994–95	46,387	19,928
1995–96	19,139	6,356
1996–97	6,315	—
	587,276	500,756

6. Travel

Expenditure for travel charged to operations is related to the peer review process and was incurred by the members of 26 grant committees, 10 award committees and the staff of the Council to meet, assess and rate grant and award applications. In addition, travel expenditure incurred by the Council, its executive and standing committees and other non-staff advisory personnel is also charged to operations.

Expenditure for travel charged to administration is for the general support of the Council's administrative activities and includes meetings of ad hoc advisory groups established to study specific issues for the Council. Details are as follows:

	1991	1990
	(in thousands of dollars)	
Operations:		
Grant Committees	563	460
Award Committees	132	103
Council/Executive	69	64
Standing Committees	38	52
Other Non-Staff	95	31
Staff	158	97
	1,055	807
Administration:		
Advisory Groups	7	15
Staff	18	19
	25	34

All members of the Council and the committees listed above serve without remuneration. Only their travel expenses are reimbursed by the Council.

Medical Research Council Schedule of Grants and Scholarships for the Year Ended March 31, 1991

(in thousands of dollars)

	1991	1990
RESEARCH FUNDING PROGRAMS		
Research grants		
Operating	134,087	128,144
Equipment	5,476	1,118
Collaborative research		
Program grants	11,841	10,693
MRC groups	14,058	14,054
Centres of excellence	19,875	400
Development grants	4,152	4,115
Special programs	1,656	874
General research grants	1,125	1,125
	192,270	160,523
PERSONNEL SUPPORT PROGRAMS		
Salary support programs		
Career investigators	3,179	3,153
Scholarships	6,798	5,515
MRC scientists	2,571	2,382
Research training programs		
Clinician-scientists	682	251
Centennial fellowships	1,162	1,154
Fellowships	15,262	11,294
Dental fellowships	252	241
Studentships	5,829	5,124
Biotechnology training awards	128	285
Farquharson research scholarships	1,022	1,002
Travel and exchange programs		
Visiting scientists	404	292
Visiting professorships	19	28
Travel grants	28	19
Symposia and workshops	193	265
	35,529	31,005
UNIVERSITY-INDUSTRY PROGRAMS		
Collaborative research	4,824	4,021
Awards	922	442
	5,746	4,463
OTHER ACTIVITIES		
President's fund	169	215
Canadian Council on Animal Care	500	469
Site reviews and other grants	1,207	666
	1,876	1,548
	235,421	197,539

PEER-REVIEW COMMITTEES

Council has approved the membership of the following peer-review committees for 1990–91. Only the professional degree and/or PhD (or equivalent) is given; the university affiliation follows the name.

	BEHAVIOURAL SCIENCES SCIENCES DU COMPORTEMENT		BIOCHEMISTRY & MOLECULAR BIOLOGY A BIOCHIMIE & BIOLOGIE MOLÉCULAIRE A		BIOCHEMISTRY & MOLECULAR BIOLOGY B BIOCHIMIE & BIOLOGIE MOLÉCULAIRE B	
Chairperson Président	David C.S. Roberts PhD	Carleton	Michael P. Walsh PhD	Calgary	Rose T.A. MacGillivray PhD	British Columbia
Scientific Officer Adjoint scientifique	Yves C. Jeanette PhD	Montréal	Peter L. Davies PhD	Queen's	David Y. Thomas PhD	Natl Res Council (Mtl)
Members Membres	Robert E. Adamec PhD	Memorial	Joan M. Boggs PhD	Toronto	Philippe J. Crine PhD	Montréal
	Roger C. Bland MD	Alberta	James R. Davie PhD	Manitoba	William S. Davidson PhD	Memorial
	Daniel N. Bub PhD	McGill	Patrick P. Dennis PhD	British Columbia	Barry W. Glickman PhD	Victoria
	David Caplan MD PhD	Harvard	Richard M. Epand PhD	McMaster	Choy-Leong Hew PhD	Toronto
	Alison S. Fleming PhD	Toronto	Michael W. Gray PhD	Dalhousie	Darel J. Hunting PhD	Sherbrooke
	Morris Freedman MD	Toronto	Jeremy S. Lee PhD	Saskatchewan	James D. McGhee PhD	Calgary
	Garry L. Martin PhD	Manitoba	Edward A. Meighen PhD	McGill	Mary D. Pato PhD	Saskatchewan
	Michael J. Meaney PhD	McGill	Robert W. Olafson PhD	Victoria	Alan G. Wilderman PhD	Guelph
	Jacques Y. Monplaisir MD PhD	Montréal	Jurgen Sygusch PhD	Sherbrooke		
	François Richard PhD	Québec à Montréal	Hans J. Vogel PhD	Calgary		
	Athanasios P. Zis MD	British Columbia				

	BIOMEDICAL ENGINEERING GÉNIE BIOMÉDICAL		CARDIOVASCULAR SYSTEM A SYSTÈME CARDIOVASCULAIRE A		CARDIOVASCULAR SYSTEM B SYSTÈME CARDIOVASCULAIRE B	
Chairperson Président	Gerald E. Loeb MD	Queen's	John R. Ledsome MD	British Columbia	D. George Wyse MD PhD	Calgary
Scientific Officer Adjoint scientifique	Michael J. Bronskill PhD	Toronto	Raul Garcia MD	Montréal	Jacques R. Rouleau MD	Laval
Members Membres	Peter S. Allen MD	Alberta	Ghassan Bkaily PhD	Sherbrooke	J. Andrew Armour MD PhD	Dalhousie
	William T. Brox MD	McMaster	Peter Bolli MD	Manitoba	Ray C.-J. Chiu MD PhD	McGill
	J. Tim Bryant PhD	Queen's	René Cardinal PhD	Montréal	Bertrand Crozatier MD PhD	INSERM U.2 (Paris)
	Charles J. Dollion MD	Laval	Michel Désilets PhD	Ottawa	Richard F. Davies MD PhD	Ottawa
	Pierre M. Galletti MD PhD	Brown (RI)	Magda Horackova PhD	Dalhousie	Anne M. Gillis MD	Calgary
	Ramesh M. Gulrajani PhD	Montréal	Susan Kaufman PhD	Alberta	Bodh I. Jugdutt MD	Calgary
	Robert E. Kearney PhD	McGill	Robert M.K.W. Lee PhD	McMaster	Raelene L. Kinlough-Rathbone MD PhD	McMaster
	Terence M. Peters PhD	McGill	Margaret P. Moffat PhD	Western Ontario	Simon W. Rabkin MD	British Columbia
	Robert N. Scott DSc	New Brunswick	Marlene Rabinovitch MD	Toronto	Tomas A. Salerno MD	Toronto
	Hans K. Uhthoff MD	Ottawa	Kitty Schwartz PhD	INSERM U. 127 (Paris)	Ernesto L. Schiffrin MD PhD	Montréal
			Henk E.D.J. ter Keurs MD PhD	Calgary	Donald D. Smyth PhD	Manitoba
					David D. Waters MD	Montréal

	CANCER		CELL PHYSIOLOGY PHYSIOLOGIE CELLULAIRE		CLINICAL INVESTIGATION RECHERCHE CLINIQUE	
Chairperson Président	Ian F. Tannock MD PhD	Toronto	Rhoda Blostein PhD	McGill	Paul G.R. Harding MD	Western Ontario
Scientific Officer Adjoint scientifique	Martin P.R. Tennisswood PhD	Ottawa	Bernard H. Bressler PhD	British Columbia	Norman S. Schachar MD	Calgary
Members Membres	Asher Begleiter PhD	Manitoba	Michel Desautels PhD	Saskatchewan	Jacob V. Aranda MD PhD	McGill
	J. Gregory Cairncross MD	Western Ontario	Jonathan M. Gerrard MD PhD	Manitoba	Geoffrey Coates MD	McMaster
	Donna A. Hogge MD	British Columbia	Wayne R. Giles PhD	Calgary	Alan F. Cruess MD	Queen's
	René Lafreniève MD	Calgary	Jan D. Huizinga PhD	McMaster	John W. Downie PhD	Dalhousie
	Normand Marceau PhD	Laval	Peter J. Reiser PhD	Illinois	Robert V. Harrison PhD	Toronto
	Malcolm C. Paterson PhD	Alberta	Reinhart A.F. Reithmeier PhD	Toronto	André Lemay MD PhD	Laval
	Andrew M. Rauth PhD	Toronto	Rémy Sauvé PhD	Montréal	Jonathan L. Meakins MD	McGill
	Kirsten A. Skov PhD	British Columbia	John R. Silvius PhD	McGill	Jean-Marie Moutquin MD	Laval
	Daniel S. Skup PhD	Montréal			Anthony S. Russell MD	Alberta
	Jim A. Wright PhD	Manitoba			Jean-Pierre Villeneuve MD	Montréal
	Maria Zannis-Hadjopoulos PhD	McGill				

	CLINICAL TRIALS ESSAIS CLINIQUES		DENTAL SCIENCES SCIENCES DENTAIRES		ENDOCRINOLOGY ENDOCRINOLOGIE	
Chairperson Président	William A. Mahon MD	Toronto	Alan G. Hannam FDS PhD	British Columbia	Yogesh C. Patel MB PhD	McGill
Scientific Officer Adjoint scientifique	Douglas W. Taylor MA	McMaster	Edwin H.K. Yen DDS PhD	Manitoba	Bruce D. Murphy PhD	Saskatchewan
Members Membres	Iain G. Chalmers MB	Oxford	Eddie C.S. Chan PhD	McGill	Harold R. Behrman PhD	Yale
	Lesley F. Degner RN PhD	Manitoba	Virginia M. Diewert DDS	British Columbia	Diego Bellabarba MD	Sherbrooke
	Vernon T. Farewell PhD	Waterloo	Johan N.M. Heersche PhD	Toronto	Robert P.J. Casper MD	Toronto
	Jacques Joliver MD	Montréal	Robin E. Howell DDS	Dalhousie	Jacques P. Epelbaum PhD	INSERM U. 159 (Paris)
	G. Ross Langley MD	Dalhousie	Hardy F. Limeback DDS PhD	Toronto	James N. Fryer PhD	Ottawa
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Conseil de recherches médicales du Canada
Medical Research Council of Canada

Rapport du Président

1990–1991

Canada

Le Conseil de recherches médicales transmet ses remerciements aux chercheurs qui ont fourni les photographies. Les exigences de l'espacement ne nous ont pas permis de toutes les utiliser.

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Conseil de recherches médicales du Canada
Medical Research Council of Canada

le 30 août 1991

L'honorable Benoît Bouchard, C.P., député
Ministre de la Santé nationale
et du Bien-être social
Ottawa (Ontario)
K1A 0K9

Monsieur le Ministre,

Conformément aux dispositions de la Loi sur le Conseil de recherches médicales, j'ai l'honneur de vous présenter le rapport annuel du Président du Conseil de recherches médicales pour l'année financière 1990–1991.

Je vous prie de recevoir, Monsieur le Ministre, l'expression de ma considération distinguée.

Le vice-président,

David Hawk

David Hawkins, M.D.

TABLE DES MATIÈRES

Mot du président 7

Le Conseil de recherches médicales du Canada 9

Les subventions de programmes communs de recherche 13

Université de l'Alberta 14
Université de Calgary 16
Université de la Colombie-Britannique 17
Université Dalhousie 21
Université McGill 22
Université McMaster 25
Université de Montréal 26
Université du Québec 33
Université Queen's 34
Université de la Saskatchewan 35
Université de Toronto 36
Université Western Ontario 41

Organigramme 42

Les membres du Conseil, 1990–1991 43

Les comités permanents du Conseil 45

Les membres du Secrétariat 47

Publications du CRM 47

Tableaux :

Ventilation des dépenses dans les universités par programmes du CRM en 1990–1991 48

Nombre de subventions et bourses, 1989–1990 & 1990–1991 50

Dépenses du CRM par programmes, de 1988–1989 à 1990–1991 et ventilation par catégorie d'appui à la recherche en 1990–1991 51

Ventilation des dépenses du CRM par province, 1987–1988 à 1990–1991 52

Subventions de fonctionnement par domaine de recherche 53

Rapport du vérificateur 54

Les comités d'examen par les pairs 61

MOT DU PRÉSIDENT

Cette année le rapport du président traite des programmes de recherches en équipes du CRM. Ces quinze dernières années, ces programmes ont permis au Conseil de donner la priorité à l'appui des efforts de collaboration des chercheurs. Dans les pages suivantes, vous pourrez mieux vous rendre compte comment des réalisations ont ainsi vu le jour dans de nombreux domaines de recherche.

Les groupes du Conseil de recherches médicales et les programmes communs constituent les programmes de recherches en équipe. Ils se différencient par leur taille : les groupes du CRM forment des équipes plus importantes, reçoivent des subventions plus élevées, pouvant atteindre 1,5 million de dollars par an, et comprennent les salaires des chercheurs, alors que ce n'est pas le cas des subventions de programmes communs. Vous vous rappelez sans doute que les groupes du CRM ont fait l'objet du rapport du président en 1987–1988.

En 1970, le CRM mettait en place ses programmes de recherche en équipe pour répondre aux besoins exprimés par des chercheurs subventionnés chacun de façon indépendante. Ces chercheurs souhaitaient joindre leurs efforts vers un intérêt commun et se trouvaient soit dans la même université, soit géographiquement éloignés les uns des autres. Des chercheurs de l'Université du Manitoba à Winnipeg désiraient collaborer avec un groupe de l'Université Queen's à Kingston (Ontario). Aucune de ces équipes ne pouvaient se prévaloir d'une subvention de groupe, mais le CRM a approuvé leur demande parce que le Conseil a compris qu'une telle mesure s'imposait.

Dès lors, le programme a pris de l'ampleur, si bien que pour l'exercice 1990–1991, on compte 40 subventions de programmes communs de recherche, d'une valeur de 11,8 millions de dollars et 13 subventions de groupes s'élevant en tout à 14 millions de dollars. Depuis la création du programme, le nombre et les montants de ses subventions ont augmenté, tandis que le CRM y consacre le même pourcentage de son budget, 15 p. 100. Cette augmentation a été rendue possible uniquement parce que le budget total du CRM s'est accru : il est passé de 50,8 millions de dollars en 1976 à 215,5 millions de dollars en 1990.

Vous pouvez donc penser que la situation du CRM, pour ce qui est des recherches en équipe, a été favorable. Mis à part l'année 1986, le budget global du CRM depuis 1982 a connu une certaine hausse, malgré les effets cumulatifs de l'inflation.

Les subventions de programmes communs qui recouvraient plusieurs équipes de diverses universités n'ont pas pris l'essor escompté. Les chercheurs qui s'engageaient dans le programme commun s'étaient taillé une réussite personnelle et, même si le besoin de collaborer avec d'autres s'avérait nécessaire, une fois la collaboration terminée, ils sont revenus travailler à leurs projets individuels. Voyager constamment a posé des problèmes d'ordre pratique. Le courrier électronique, les télécopieurs peuvent apporter bien des solutions; il n'en demeure pas moins que pour en arriver à des conclusions, les chercheurs préfèrent se parler en personne. Les voyages représentent non seulement une dépense d'énergie, mais aussi de temps et d'argent.

Ainsi, les subventions de programmes communs ont évolué : pour des raisons pratiques, il s'est avéré que le travail de laboratoire et d'administration s'accomplit plus facilement si les équipes de chercheurs s'associent au lieu de fusionner.

Même si la mise en place d'une équipe de programmes communs de recherche présente certaines difficultés, ces subventions sont souples et remportent du succès, parce qu'elles représentent un excellent moyen d'appuyer des projets pluridisciplinaires. D'autre part, leur succès explique qu'elles aboutissent à la création d'un excellent milieu de formation des stagiaires de recherche.

Cette année, vous trouverez dans ce rapport une excellente illustration des programmes communs de recherche appuyés par le Conseil et du défi que représentent de telles entreprises.

Il s'agit aussi de mon dernier rapport en tant que président du CRM. Ces dix dernières années comptent parmi les plus bénéfiques de ma carrière, d'un point de vue personnel et professionnel. Permettez-moi d'exprimer ici la profonde gratitude que je porte à tous ceux et à toutes celles qui ont si généreusement accordé sans compter leur expertise et leur énergie au travail du Conseil pendant la durée de mon mandat de président.

Pierre Bois, M.D., Ph.D.*

*Le Dr Bois a pris sa retraite en tant que président du CRM le 2 juin 1991.

LE CONSEIL DE RECHERCHES MÉDICALES DU CANADA

Établi par le Parlement en 1969, le Conseil de recherches médicales du Canada (CRM) est un organisme fédéral qui favorise, aide et entreprend des recherches pures, appliquées et cliniques dans les sciences de la santé au Canada. Le CRM agit aussi comme conseiller sur la recherche en matière de santé auprès du ministre de la Santé nationale et du Bien-être social, par l'intermédiaire duquel le Conseil relève du Parlement.

Le Président à temps plein du Conseil en est également le fonctionnaire exécutif en chef. 21 autres membres, non rémunérés, représentent le milieu scientifique et le grand public et, comme le Président, sont nommés par le gouverneur en conseil. Le Conseil comprend également trois membres associés qui représentent les deux autres organismes fédéraux de financement de la recherche et le ministère de la Santé nationale et du Bien-être social.

Un comité de direction, composé d'au moins six membres du Conseil en plus du Président et du Vice-Président, exerce par voie de délégation du Conseil des pouvoirs et des fonctions exécutives.

Des comités permanents aident le Conseil à formuler les politiques et les procédures à suivre pour les communications, l'éthique et l'expérimentation, la planification et l'élaboration des priorités, et pour le financement de la recherche et du personnel.

De plus, 39 comités de scientifiques évaluent les demandes de subventions et de bourses, et jugent du mérite scientifique des demandes. Quelque 350 chercheurs remplissent des fonctions à temps partiel, sans rémunération, dans le cadre des activités des comités permanents et des comités d'examen, et des activités connexes telles que les visites d'évaluation.

Situé à Ottawa et sous la direction du Président, un Secrétariat de 65 personnes à temps plein fournit des services généraux au Conseil, au comité de direction, et à tous les autres comités établis par le Conseil. Le Secrétariat comprend : le Bureau du Président; la Direction des programmes; la Direction de l'évaluation scientifique; la Direction des programmes université-industrie; la Direction de la gestion intégrée; et la Direction des communications.

Le Conseil n'a pas de laboratoires. Ses responsabilités comportent l'appui de la recherche et de la formation en recherche dans les sciences de la santé dans les universités, les hôpitaux et les établissements qui s'y rattachent. Le Conseil de recherches médicales a aussi un autre objectif, soit celui d'encourager la collaboration entre le secteur industriel, les universités et les établissements de soins de santé de façon à favoriser le développement des nouvelles découvertes et de leur application. En outre, le Conseil administre les subventions accordées dans le cadre du Programme des réseaux de centres d'excellence.

Programmes

Le CRM atteint ses buts à l'aide des programmes suivants.

Par ses *programmes de financement de la recherche*, le CRM appuie les projets des chercheurs des facultés canadiennes de médecine, de médecine dentaire, de sciences infirmières, de pharmacie, et de médecine vétérinaire et établissements qui s'y rattachent, ainsi que ceux du personnel d'autres départements pourvu que la recherche soit reliée à un problème de santé humaine.

Les **subventions de recherche** assument les coûts directs de projets de recherche en sciences de la santé, tels que proposés et effectués par les chercheurs :

1. Les **subventions de fonctionnement** sont accordées pour des projets de recherche, dirigés par un chercheur travaillant seul ou en collaboration avec d'autres. Les subventions peuvent servir à engager des adjoints ou des stagiaires, à l'achat de matériel, de fournitures et de pièces d'équipement, à l'achat et à l'entretien d'animaux de laboratoire, ainsi qu'au remboursement de certains frais de déplacement.

2. Les **subventions d'achat d'appareils** sont accordées en vue de l'acquisition de pièces d'équipement dans le cadre d'un projet de recherche.

3. Les **subventions pour l'achat d'appareils à utilisateurs multiples** augmentent les potentiels de recherche du plus grand nombre possible de chercheurs dans une institution ou une région donnée. Des installations de microscope électronique ou d'imagerie pourraient faire l'objet de telles subventions.

4. Les **subventions d'entretien** sont accordées en vue du fonctionnement et de l'entretien d'installations pour un seul chercheur.

5. Les **subventions pour l'entretien d'appareils à utilisateurs multiples** assument les coûts d'entretien d'installations utilisées en commun par des groupes de chercheurs dans un département, une faculté, une université ou une région donnée.

Il y a trois **programmes de recherches en équipe** pour assumer les coûts de projets de recherche multidisciplinaires dans les sciences de la santé et qui sont entrepris par des chercheurs travaillant en collaboration.

1. Les **subventions de programme commun de recherche** appuient un programme de recherche comportant des activités de recherche spécialisées, effectuées par au moins trois chercheurs. Le programme est multidisciplinaire, et peut prendre naissance et être mené dans un ou plusieurs départements, facultés ou établissements canadiens.

2. Un **groupe du CRM** est considéré comme un centre d'excellence pour la recherche et la formation dans le domaine des sciences de la santé. Il appuie des équipes de quatre chercheurs établis ou plus, qui collaboreront pendant un certain nombre d'années, dans des domaines qui semblent particulièrement importants et productifs.

3. Le Conseil administre les subventions accordées dans le cadre du **Programme des réseaux de centre d'excellence** instauré par Industrie, Sciences et Technologie Canada le 26 octobre 1989.

Quant aux autres subventions :

Les **subventions de développement** fournissent un appui aux facultés de médecine, médecine dentaire, pharmacie et médecine vétérinaire pour favoriser la mise sur pied de programmes de recherche.

Les **essais cliniques** évaluent d'une manière rigoureuse l'efficacité des protocoles diagnostiques et thérapeutiques.

Les **subventions générales de recherche** aux doyens des facultés de médecine, de médecine dentaire, de pharmacie et de médecine vétérinaire leur permettent d'utiliser ces fonds à leur discrétion pour la promotion de projets locaux.

Le CRM et le ministère de la Santé nationale et du Bien-être social, dans le cadre de son programme de recherche et de développement en matière de santé (PNRDS), offrent un **programme conjoint pour le développement de la recherche dans les facultés ou les écoles de sciences infirmières**. Ce programme est en cours d'évaluation, et aucune nouvelle demande n'est acceptée.

Selon le besoin, le Conseil peut aussi subventionner des **programmes spéciaux** qui n'entrent pas dans le cadre de ses programmes réguliers.

Par ses *programmes d'appui du personnel de recherche*, le CRM vient directement en aide au personnel ou aux stagiaires de recherche.

Il y a cinq **programmes de formation en recherche**.

Les **bourses de recherche Farquharson** permettent aux étudiants du premier cycle de s'initier à la recherche.

Les **bourses de stagiaire de recherche** sont destinées aux étudiants des cycles supérieurs qui entreprennent une formation en vue d'obtenir une M.Sc. ou un Ph.D.

Les **bourses du centenaire** et les **bourses de recherche** sont accordées à des étudiants postdoctoraux qui détiennent un M.D., un D.D.S., un D.M.V., un Pharm.D. ou un Ph.D.

Les **bourses en recherche dentaire** sont offertes aux candidats, détenteurs d'un D.D.S. (ou l'équivalent), présentés par les facultés de médecine dentaire en vue de former des cliniciens enseignants capables d'effectuer des recherches autonomes.

Le **programme de cliniciens-chercheurs** a pour but d'encourager les professionnels de la santé, détenteurs de M.D., à se former en recherche et également de les aider à s'établir en tant que chercheur indépendant.

Il y a trois **programmes d'appui salarial**.

Le programme des **chercheurs de carrière** assure un appui salarial à un certain nombre de chercheurs hautement qualifiés qui ont fait de la recherche une carrière à temps plein. Aucune nouvelle demande n'est acceptée pour ce programme.

Le programme de **scientifiques du CRM** vise à assurer un appui salarial, pour une période de cinq ans, à des chercheurs exceptionnels qui ont démontré qu'ils peuvent devenir des chefs de file dans leurs domaines de recherche respectifs.

Le programme de **chercheurs-boursiers** donne à ceux qui viennent de terminer leur formation en recherche la chance de démontrer qu'ils peuvent effectuer de la recherche indépendante.

Les **programmes de voyages et d'échanges** offrent des occasions de collaboration et d'échange d'informations entre des scientifiques canadiens et leurs collègues au Canada et à l'étranger, et assument les coûts d'**ateliers** et de **colloques** où les participants abordent des problèmes importants ayant trait à la recherche en sciences de la santé au Canada en vue d'en arriver à un consensus. Ces programmes comprennent les **chercheurs** et les **professeurs invités**, les **échanges scientifiques Argentine-Canada**, **Brésil-Canada**, **Chine-Canada**, **France-Canada**, **Italie-Canada**, ceux avec l'**Europe de l'Est** et les **subventions de voyage**.

Les *programmes université-industrie* créent des occasions de collaboration entre les chercheurs qui œuvrent dans des compagnies canadiennes et ceux qui dirigent des recherches dans les universités canadiennes ou leurs établissements affiliés. Ces programmes comportent :

Les **recherches en équipe université-industrie** (subventions de fonctionnement et essais cliniques) pour financer des projets de recherche en sciences de la santé qui répondent à un besoin industriel.

Les **chaires université-industrie de recherches** en vue d'aider les universités à recruter des chercheurs exceptionnels pour renforcer l'expertise nécessaire au développement et au transfert des nouvelles connaissances vers l'industrie.

Les **bourses de recherches industrielles** qui donnent à un candidat détenant un diplôme supérieur l'occasion d'une formation en milieu industriel.

Les **échanges université-industrie** pour séjourner dans un laboratoire en tant que chercheur invité.

Les **ateliers** qui créent des occasions de communiquer et de résoudre des problèmes communs.

Voici les **autres programmes de financement conjoint** :

les bourses de carrière du CRM et de la Fondation ACIM (Association canadienne de l'industrie du médicament) pour la recherche en sciences de la santé;

les bourses de recherche ou de stagiaires de recherche du CRM et de Ciba-Geigy;

les bourses de recherche du CRM et de ICI Pharma;

les bourses de recherche du CRM, de la société canadienne de néphrologie et des laboratoires Baxter;

les bourses de recherche du CRM, de la Société Alzheimer du Canada et de Price Daxion.

Les *autres activités* du CRM incluent une subvention au **Conseil canadien de protection des animaux**, les dépenses pour les **visites d'évaluation** et le **Fonds du président**.

15e ANNIVERSAIRE DES SUBVENTIONS DE PROGRAMMES COMMUNS DE RECHERCHE

Chaque année, dans son rapport annuel, le président souligne un aspect particulier des projets de recherche biomédicale entrepris au Canada par des scientifiques qui ont obtenu une subvention du Conseil de recherches médicales.

Le rapport de cette année contient une série d'articles qui montrent bien le large éventail des recherches biomédicales entreprises par des scientifiques qui bénéficient de subventions de programmes communs de recherche.

Les Subventions de programmes communs de recherche ont été mises sur pied en 1976–1977; il s'agissait de l'un des moyens utilisés par le CRM pour faciliter le développement de la recherche en équipe au Canada. Depuis leur création, ces subventions ont été conçues de manière à soutenir des projets de recherche bien intégrés et menés par au moins deux chercheurs. Selon les dispositions des Subventions de programmes communs de recherche, cette recherche peut concerner une ou plusieurs disciplines et être conçue et menée dans un ou plusieurs départements, facultés ou universités. Chaque élément du programme de recherche doit en soi posséder la qualité qui lui permette de recevoir un financement dans le cadre du programme des subventions de fonctionnement.

De plus, le fait de réunir différents éléments de recherche en un seul programme doit permettre d'entrevoir une plus grande productivité. Depuis le premier concours des Subventions de programmes communs de recherche, le Conseil étudie les demandes faites par des chercheurs qui détiennent une nomination universitaire dans des établissements de formation de professionnels de la santé au Canada. Toutefois, il étudie également les demandes venues de chercheurs qui travaillent en milieu universitaire dans des disciplines autres que les sciences de la santé, que le programme contienne ou non des recherches entreprises par des chercheurs du domaine des sciences de la santé, à condition que ces recherches soient directement liées à la santé des humains.

Au cours des quinze dernières années, certains changements ont été apportés aux Subventions de programmes communs de recherche. À l'heure actuelle, ces subventions visent à venir en aide à des équipes d'au moins trois chercheurs qui effectuent ensemble des recherches multidisciplinaires dans le domaine des sciences de la santé dans les universités canadiennes.

Grâce à la mise en commun des installations et des services, le programme facilite maintenant l'interaction scientifique en vue de développer de nouvelles techniques ou de nouvelles recherches dans le cadre d'un programme intégré de recherches.

L'endroit où sont effectuées les recherches devrait permettre la formation dans plus d'un domaine, afin que les stagiaires soient exposés à diverses techniques. Les subventions sont donc accordées à plusieurs projets dont chacun est suffisamment de qualité pour mériter sa propre subvention.

Aujourd'hui, on exige de chaque chercheur un profond engagement à l'égard de la collaboration. On s'attend à ce que la majorité des membres de l'équipe consacrent 75 p. 100 de leurs efforts de recherche au programme pro-

posé; ils peuvent toutefois poursuivre d'autres recherches, en-dehors du travail qu'ils accomplissent dans le cadre du programme. Le projet proposé peut avoir été conçu et être effectué dans un seul ou dans plusieurs départements, facultés ou établissements canadiens; l'un des candidats agit comme coordonnateur et, à ce titre, est le principal titulaire de la subvention.

Au début, les subventions de programmes communs de recherche pouvaient être attribuées pour une période pouvant aller jusqu'à trois ans, et elles étaient renouvelables. Aujourd'hui, la subvention peut s'étendre sur cinq années. Toutefois, elle doit faire l'objet d'une évaluation avant la fin de la troisième année.

En 1990–1991, 40 projets ont été subventionnés dans le cadre des Subventions de programmes communs de recherche; le total de ces subventions s'est élevé à 11,8 millions de dollars.

À l'Université de l'Alberta, des recherches sur les façons d'encourager la réparation des tissus nerveux

Des études en cours à l'Université de l'Alberta pourraient ouvrir de nouvelles perspectives sur les moyens d'aider les tissus nerveux à guérir à la suite d'une lésion au cerveau ou à la moelle épinière.

Une équipe de scientifiques du domaine de la neurobiologie moléculaire et du développement, dirigée par le Dr Richard Murphy, étudie les assises cellulaires et moléculaires de la différenciation, de la croissance et de la régénération des neurones. Ces chercheurs veulent mettre au point des stratégies propres à favoriser la réparation des tissus nerveux à la suite d'une lésion. Alors que la réparation des nerfs périphériques se fait normalement à la suite d'une blessure, les tissus nerveux endommagés du cerveau et de la moelle épinière ne se régénèrent pas, ce qui a des conséquences désastreuses et permanentes chez les victimes d'accident vasculaire cérébral et de lésion à la moelle épinière, ainsi que chez les personnes atteintes d'une maladie neurodégénérative, comme la maladie d'Alzheimer.

Le Dr Murphy étudie la chimie de la famille des protéines neurotrophiques du facteur de croissance des tissus nerveux, un groupe de molécules qui encourage la croissance des cellules nerveuses et favorise leur survie. Des études chimiques, faites en collaboration avec le Dr Ann Acheson, indiquent que des quantités similaires de ces protéines réussissent à promouvoir la croissance des cellules nerveuses; cette information pourrait être utile pour la mise au point de nouveaux médicaments pour le traitement des nerfs endommagés.

Le Dr Acheson étudie le rôle des molécules d'adhésion cellulaire dans la différenciation des cellules précurseurs embryonnaires dans les neurones, dans la croissance axonale et dans la régénération axonale après une lésion nerveuse. Les axones sont essentiels à la conduction de l'influx nerveux.

Le Dr Robert Campenot, qui a mis au point un système de culture compartimenté maintenant utilisé dans le monde entier, utilise le même système pour identifier les seconds messagers qui contrôlent la croissance neuronale et pour étudier comment les phospholipides sont introduits dans les membranes axonales. En collaboration avec le Dr Acheson, il cherche à déterminer si le facteur inhibiteur de la leucémie déclenche la fonction de neurotransmetteur cholinergique en agissant sur les terminaisons nerveuses sympathiques.

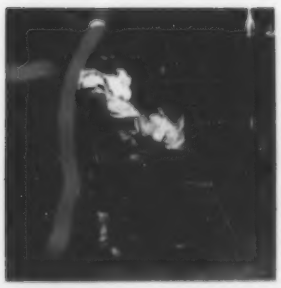
Le Dr Freda Miller étudie comment les signaux à l'intérieur et à l'extérieur des neurones régularisent l'expression génique du neurone. Elle concentre ses efforts sur la famille multigène de la tubuline; elle a démontré qu'un membre de cette famille est un marqueur neuronal sensible. Le Dr Miller et le Dr Campenot mesurent l'expression génique dans les neurones cultivés dans des compartiments. Ils espèrent que ces travaux permettront de faire la lumière sur les signaux environnementaux qui provoquent l'expression génique dans les neurones endommagés et qu'ils donneront lieu à une épreuve simple et rapide pour déterminer l'état de croissance des neurones chez les animaux nouveau-nés et adultes.

Le Dr Richard Smith poursuit des recherches sur les mouvements moléculaires à l'intérieur des axones; il met surtout l'accent sur les rapports entre le transport rapide des protéines et les vésicules qui les transportent. Il a montré que deux pour cent des protéines qui sont rapidement transportées sont fixées à chaque millimètre de l'axone et que cette quantité augmente chez les neurones en voie d'être régénérés.

Une équipe de l'Université de l'Alberta cherche de nouvelles façons d'aider les patients affligés de dyskinésies

Beaucoup de Canadiens qui souffrent de dyskinésies diverses causées par des accidents ou des maladies pourraient bénéficier des travaux de recherche et de développement actuellement en cours à l'Université de l'Alberta.

Une équipe de soins neurologiques axés sur la réadaptation, dirigée par un physiologiste, le Dr Richard Stein, étudie comment le système nerveux contrôle et adapte les mouvements dans diverses conditions. Ces chercheurs veulent joindre ces connaissances aux techniques les plus récentes dans les domaines du génie et de l'informatique. Les résultats pourraient avoir d'importantes répercussions pour les personnes souffrant de troubles de la motricité. L'équipe vise, entre autres, à mettre au point de nouvelles méthodes propres à améliorer la mobilité des personnes affligées de dyskinésies. Les nouveaux appareils peuvent, entre autres, servir à améliorer la marche chez les patients qui ont une lésion de la moelle épinière, les victimes d'un accident vasculaire cérébral ou les personnes qui ont été amputées au-dessus du genou; ils peuvent aussi servir à améliorer la fonction de la main chez les quadriplégiques et à réduire les tremblements chez ceux qui souffrent de la maladie de Parkinson et de lésions du cervelet.



Une enfant paralysée à la suite d'une lésion de la moelle épinière marche à l'aide d'un appareil muni d'un dispositif qui stimule électriquement les muscles de ses jambes et rend la marche possible.

L'équipe, qui travaille maintenant en collaboration avec d'autres chercheurs du Canada dans le cadre d'un réseau de centres d'excellence sur la régénération nerveuse et la réadaptation fonctionnelle, a à son crédit un certain nombre de « premières » au Canada. Entre autres innovations, on remarque les électrodes introduites sous la peau pour transmettre en permanence l'activité électrique des muscles profonds vers la prothèse myoélectrique, la « commande à effleurement » pour permettre aux musiciens amputés de poursuivre leur art, le recours, pour la première fois au Canada, aux fils percutanés pour redonner aux personnes souffrant de paralysie des quatre membres la capacité de saisir des objets et pour redonner aux personnes souffrant d'hémiplégie (paralysie d'une moitié du corps) due à un accident vasculaire cérébral la capacité de fléchir la hanche, ce qui contribue à améliorer leur démarche.

Les chercheurs de l'équipe ont aussi mis au point un système pratique visant à redonner la capacité de marcher aux personnes qui souffrent d'une para-

plégie due à une lésion de la moelle épinière; ils ont utilisé un implant pour contrôler les mouvements des muscles paralysés grâce à la télémétrie ou aux ondes hertziennes.

Ils étudient également la structure du réseau nerveux de la moelle épinière, qui génère, au niveau des vertèbres, la marche alternée.

Un autre projet consiste à étudier les mécanismes qui régissent la régénération nerveuse et le recouvrement de la fonction musculaire après une lésion du système nerveux central ou périphérique. Les chercheurs se posent les questions suivantes : Y a-t-il des facteurs périphériques qui peuvent être appliqués aux neurones centraux pour favoriser ce qui, après une lésion, n'est normalement qu'une régénération très limitée? Dans quelle mesure peut-on avoir recours à la stimulation électrique ou à d'autres traitements pour inverser les effets de l'inactivité après une lésion de la moelle épinière?

Les autres membres de l'équipe sont les Docteurs Keir Pearson, Arthur Prochazka, Tessa Gordon, Dejan Popovic et Thomas Martin.

Des chercheurs de l'Université de Calgary étudient l'hypertension et l'arrêt cardiaque dû à l'arythmie

Des chercheurs de l'Université de Calgary tentent de recueillir de nouvelles données au sujet des maladies cardiovasculaires, qui sont la première cause de décès au Canada.

Une équipe multidisciplinaire poursuit des recherches sur l'hypertension et sur l'arrêt cardiaque dû à l'arythmie, qui tous deux sont étroitement liés à la cardiopathie ischémique.

L'équipe de chercheurs, dirigée par le D[r] D. George Wyse du département de cardiologie de l'hôpital Foothills, comprend des cardiologues, des physiologistes et des pharmacologistes, qui étudient l'activité électrique du cœur et des vaisseaux sanguins ainsi que les effets des médicaments sur cette activité électrique, tant sur les tissus sains que sur les tissus malades.

Sur le plan clinique, l'équipe met l'accent sur l'arrêt cardiaque dû à l'arythmie, ainsi que sur son traitement à l'aide de médicaments et d'appareils. Elle étudie également l'hypertension.

Le D[r] George Wyse, à droite, avec un patient souffrant d'un trouble cardiaque, dans le laboratoire d'électrophysiologie cardiaque de l'hôpital Foothills de Calgary.

Les maladies cardiovasculaires sont la cause de décès la plus courante au Canada; elles sont en effet responsables de 80 000 décès par année, soit 40 pour cent de tous les décès. De ce nombre, 50 000 sont dus à la cardiopathie ischémique, dont la moitié sont des arrêts cardiaques dus à un rythme cardiaque rapide et désordonné ou fibrillation ventriculaire, les ventricules étant les principaux compartiments de pompage du cœur. Lorsqu'il y a fibrillation ventriculaire, le cœur ne pompe pas et si la situation n'est pas rétablie, le patient meurt.

« Chaque année, quelque 25 000 à 30 000 Canadiens meurent de fibrillation ventriculaire », explique le D[r] Wyse, et il ajoute que l'hypertension, qui touche jusqu'à 20 pour cent des adultes, constitue un important facteur de risque de cardiopathie ischémique et d'accident vasculaire cérébral qui, ensemble chaque année, sont la cause de 65 000 parmi les 80 000 décès.

Dans le but d'essayer de régler ces problèmes, les chercheurs de l'équipe ont entrepris plusieurs projets, parmi lesquels on compte une étude faite auprès de patients et portant directement sur les problèmes cliniques de la tachycardie ventriculaire, état qui est marqué par un rythme ventriculaire rapide, mais moins désordonné, qui précède souvent le début de la fibrillation ventriculaire.

Dans le cadre d'un autre projet, les chercheurs étudient les avantages et les risques qui sont associés à l'utilisation de combinaisons de deux différents médicaments régulateurs du rythme cardiaque. Beaucoup de médicaments utilisés pour le traitement des arythmies et de l'hypertension agissent en modifiant le mouvement des ions, tels que le sodium, le potassium et le calcium, à travers la membrane cellulaire. Le Dr Wyse croit que les arythmies ou l'hypertension pourraient être dues, en partie, à des anomalies sur le plan du mouvement des ions. Un projet porte sur le mouvement des ions et un autre vise à étudier avec soin cette possibilité sur le plan moléculaire.

Les autres membres de l'équipe sont Robert Clark, Henry Duff, Robert French, Wayne Giles, Anne Gillis, Brent Mitchell, Robert Sheldon et Chris Triggle.

Université de la Colombie-Britannique : recherches de nouveaux médicaments pour femmes enceintes, nouveau-nés et enfants

Une importante étude effectuée par des chercheurs de l'Université de la Colombie-Britannique pourrait produire une pharmacothérapie plus sûre et plus efficace pour les femmes enceintes, les nouveau-nés et les enfants.

Une équipe de chercheurs, appartenant à plusieurs disciplines et dirigée par le Dr James Axelson de la faculté des sciences pharmaceutiques, étudie la cinétique, les effets et la toxicologie des médicaments utilisés chez les femmes enceintes, chez les nouveau-nés et les enfants.

Le Dr Axelson est d'avis que malgré une meilleure connaissance des risques qui accompagnent la consommation de médicaments pendant la grossesse, un bon nombre de médicaments, y compris des produits grand public, sont largement utilisés pendant cette période.

On sait, par exemple, grâce aux résultats d'un sondage, que 23 pour cent des femmes enceintes prennent des médicaments grand public qui contiennent des antihistamines.

Il existe maintenant des médicaments plus efficaces pour les maladies du cœur, l'épilepsie et l'hypertension; les obstétriciens ont aussi une meilleure connaissance de ces troubles lorsqu'ils se produisent pendant la grossesse. Pour ces raisons, explique le Dr Axelson, on a maintenant davantage recours aux médicaments pour traiter ces troubles ainsi que les autres complications de la grossesse, comme l'accouchement prématuré.

Pour traiter les troubles associés au fœtus, il existe aussi de plus en plus de médicaments qui peuvent être administrés à la future mère. Les grands progrès qui ont été faits dans le domaine des soins néonatals permettent la survie de prématurés comptant beaucoup moins de semaines de gestation; ces enfants souffrent souvent de problèmes médicaux qui requièrent une pharmacothérapie.

Des médicaments sont aussi plus fréquemment administrés pendant l'enfance pour traiter certaines maladies, comme la leucémie et l'épilepsie.

« Malgré ces facteurs, qui ont mené à une utilisation accrue de médicaments chez les femmes enceintes, les nouveau-nés et les enfants, la connaissance de la cinétique, de la dynamique et de la toxicologie des médicaments chez ces sujets a été dépassée par l'arrivée constante sur le marché de nouveaux agents thérapeutiques », souligne le Dr Axelson.

Le projet de recherche de ce groupe a pour but de mieux comprendre l'action des médicaments pendant la grossesse et l'enfance, afin d'offrir aux femmes enceintes, aux nouveau-nés et aux enfants des traitements plus sûrs et plus efficaces.

Les autres membres de l'équipe de chercheurs sont les Docteurs Frank Abbott et Wayne Riggs de la faculté des sciences pharmaceutiques, le Dr Dan Rurak, du département d'obstétrique et de gynécologie et le Dr Kevin Farrell du département de pédiatrie de la faculté de médecine.

Université de la Colombie-Britannique : recherches de nouveaux traitements pour les affections dégénératives du cerveau

Des recherches en cours à l'Université de la Colombie-Britannique pourraient donner lieu à de nouveaux modes de traitement visant à ralentir la progression d'un certain nombre d'affections neurodégénératives, comme la maladie de Parkinson et la sclérose latérale amyotrophique.

Le Dr Donald Calne et ses collègues forment une équipe multidisciplinaire qui étudie les affections dégénératives les plus courantes qui mènent à l'impotence, notamment la maladie de Parkinson et la sclérose latérale amyotrophique (SLA), ou maladie de Charcot.

Selon le Dr Calne, neurologue de réputation internationale, c'est parce que les causes de ces maladies sont inconnues qu'on les compare à la chorée de Huntington, autre affection neurologique chronique qui atteint des régions similaires du cerveau, mais dont l'origine génétique est connue.

Les membres de cette équipe de chercheurs se servent d'un certain nombre de techniques, comme la tomographie par positons, la pharmacologie clinique, l'électrophysiologie, l'immunohistochimie, la culture cellulaire et la biologie moléculaire. Ils vont tenter de mettre au point des méthodes pour détecter les anomalies du cerveau avant que les symptômes ne se manifestent; ils ont déjà obtenu certains succès sur ce plan. Dans le but de ralentir le processus de destruction des cellules nerveuses qui caractérise ces maladies, ils se proposent d'utiliser de nouveaux modes de traitement. Ils étudieront, notamment, des médicaments qui entravent la libération, dans le cerveau, de substances « excitantes » potentiellement nuisibles. En ce qui concerne la maladie de Parkinson et la SLA, par exemple, un certain nombre d'hypothèses ont été émises au sujet de leur cause, après qu'on eut étudié une manifestation de ces maladies très répandue à Guam.

Certains ont établi un lien causal entre cette dernière et un agent toxique excitant. Cette hypothèse est à l'origine de l'intérêt manifesté par les chercheurs à l'endroit d'un agent excitant qui serait à l'origine de la maladie de Parkinson et de la SLA.

Au cours de ses recherches sur la maladie de Parkinson, l'équipe a pratiqué la tomographie par positons chez des patients et des personnes normales; elle suivra ces mêmes groupes de sujets pendant un certain temps. Chez les personnes qui souffrent de maladies semblables à la maladie de Parkinson, on constate une déplétion en dopamine (substance chimique messagère ou neurotransmetteur essentiel) des cellules du cerveau; ces personnes doivent prendre des médicaments pour atténuer les symptômes de la maladie.

Outre le directeur, l'équipe est composée des Docteurs Andrew Eisen, Michael Hayden, Seung Kim, Charles Krieger, Edith McGeer, Brian Pate, Thomas Ruth, Barry Snow et Joseph Tsui.

Université de la Colombie-Britannique : trouver un remède à deux troubles courants de la vision

Un nombre considérable de personnes souffrant de deux troubles de la vision pourraient un jour recouvrer une vue normale si le projet de recherche en cours à l'Université de la Colombie-Britannique est couronné de succès.

Le Dr Max Cynader dirige une équipe de chercheurs qui étudient les mécanismes cérébraux qui sont à l'origine du strabisme et de l'amblyopie. Le strabisme est un trouble courant qui touche plus de 5 millions de Nord-Américains; il s'agit d'un défaut de parallélisme des axes optiques des yeux. Il y a deux types de strabisme : le strabisme convergent où les axes des deux yeux convergent, et le strabisme divergent où les axes des deux yeux divergent. Le Dr Cynader, qui est professeur d'ophtalmologie à l'Université de la Colombie-Britannique, explique que bien que le strabisme puisse s'accompagner d'un trouble au niveau des muscles des yeux, dans bien des cas le véritable problème se situe à l'intérieur du cerveau.

L'amblyopie est associée au strabisme; il s'agit du phénomène des « yeux paresseux ». Il en résulte une baisse de l'acuité visuelle dans un œil ou dans les deux yeux, sans anomalies périphériques visibles.

Le groupe du Dr Cynader, ainsi que d'autres chercheurs, ont constaté que l'amblyopie est souvent due à une stimulation inappropriée d'un œil ou des deux yeux au cours de la période de développement qui suit immédiatement la naissance. Leurs recherches ont pour but de comprendre comment l'exposition à une stimulation visuelle au début de la vie peut entraîner un trouble permanent de la vision comme l'amblyopie et un déficit visuo-moteur comme le strabisme.

L'un des membres de l'équipe, le Dr Donald Mitchell de l'Université Dalhousie, a mis au point une méthode nouvelle et sensible de mesure de la résolution et de l'acuité visuelles, ainsi que de nouveaux traitements visant à retrouver la fonction visuelle.

À ce jour, les chercheurs ont établi, entre autres réalisations, la zone du cerveau qui semble être dangereusement atteinte dans l'amblyopie. Ils ont montré que la rétine et l'appareil oculaire périphérique sont fondamentalement normaux dans la plupart des formes de la maladie et que le problème se situe au point où l'information visuelle pénètre dans le cortex visuel du cerveau.

Ils étudient comment l'information visuelle pénètre dans le cortex normal et comparent ce mécanisme à celui qui prévaut dans les cas d'amblyopie.

Dans les cas normaux où l'acuité visuelle est bonne dans les deux yeux, les deux yeux se partagent la plus grande partie de la surface du cortex visuel. Cependant, dans les cas de strabisme, ces zones de contrôle partagé sont sensiblement réduites, chaque œil rivalisant avec l'autre pour s'assurer l'exclusivité de l'information visuelle dans une zone du cortex; cette rivalité donne lieu à une rupture de la communication entre les informations venues des deux yeux, ce qui réduit la vision binoculaire. Dans l'amblyopie, la situation est pire car bien que l'œil lui-même puisse fonctionner normalement, ses liens avec le cortex sont perdus et on assiste à une diminution constante du territoire cortical avec lequel il peut travailler.

Les Docteurs Nicholas Swindale et Joanne Matsubara étudient comment l'information visuelle venant des deux yeux est répartie sur la surface du

cortex et comment ces informations sont compromises par une exposition visuelle anormale.

Les recherches ont révélé que l'amblyopie et le strabisme sont tous deux dus à une stimulation inappropriée de l'œil au cours d'une « période critique » qui suit immédiatement la naissance. Chez les humains, une stimulation inappropriée de l'œil au cours de la première ou des deux premières années de vie peut provoquer des anomalies oculaires permanentes. Les chercheurs ont constaté que plusieurs types de récepteurs des neurotransmetteurs dans le cerveau, qui sont essentiels à la transmission des signaux entre les cellules dans le cortex visuel, ne sont présents dans certains groupes de cellules qu'au cours de cette période critique. Selon eux, la manifestation passagère de ces récepteurs se fait au cœur de la période critique et ils espèrent être capables de guérir ces anomalies visuelles en réussissant à faire revivre la période critique chez l'adulte.

« Si nous pouvons recréer, chez les sujets adultes, les conditions qui prévalaient au début de leur développement », dit le Dr Cynader, « nous pourrons alors les traiter grâce, par exemple, à des traitements orthoptiques intensifs, même chez les adultes. »

Un autre membre de l'équipe, le Dr Franco Lepore de l'Université de Montréal, a montré que le corps calleux, lame de substance qui réunit les deux hémisphères visuels du cortex, joue un rôle essentiel dans la vision binoculaire médiane; il a déterminé les déficits associés à cette voie dans des expériences sur l'amblyopie et le strabisme.

Enfin, à l'aide de techniques propres à la biologie moléculaire, l'équipe espère permettre à l'œil qui a perdu le contrôle de sa part du cortex de le reprendre. Si elle réussit, elle pourra redonner aux personnes qui les ont perdues, la capacité visuelle et la vision binoculaire.

Université de la Colombie-Britannique : nouvelles données sur la schizophrénie et meilleurs médicaments

De nouvelles données sur la schizophrénie et la possibilité de trouver rapidement de nouveaux agents antipsychotiques ayant moins d'effets secondaires pourraient faire partie des effets positifs d'une recherche actuellement effectuée par une équipe de chercheurs de l'Université de la Colombie-Britannique.

Le Dr Christian Fibiger, du département de psychiatrie, coordonne un projet qui vise à recueillir des données fondamentales au sujet de la physiologie, de la pharmacologie, de la fonction de régulation et de la fonction du comportement de groupes de cellules nerveuses du cerveau connues sous le nom de neurones contenant de la dopamine, tant chez des sujets sains que chez des sujets malades. Selon le Dr Fibiger, on possède des preuves solides que ces neurones jouent un rôle important dans la schizophrénie, la dépression et la maladie de Parkinson, qui sont, à l'heure actuelle, les affections psychiatriques et neurologiques les plus courantes et les plus débilitantes au monde.

Dans la maladie de Parkinson, par exemple, nous savons que les neurones qui contiennent de la dopamine, dans une région appelée substance noire, meurent prématurément et que le traitement le plus courant consiste à remplacer la dopamine dans le cerveau par l'administration de L-DOPA, précurseur chimique de la dopamine naturelle.

Par contre, les médicaments les plus couramment employés pour le traitement de la schizophrénie sont des agents qui bloquent les récepteurs de la

dopamine dans le cerveau. Selon le Dr Fibiger, cela laisse entendre que certains systèmes qui contiennent de la dopamine sont peut-être anormalement actifs dans le cerveau des schizophrènes.

Son équipe, composée également d'Anthony Phillips et de Charles Blaha du département de psychologie, utilise de nouvelles techniques, comme les analyses de voltamétrie et de microdialyse cérébrale in vivo, dans le but de mesurer la libération de dopamine dans des régions distinctes du cerveau, chez des modèles expérimentaux.

Dans des études connexes, les chercheurs de l'équipe mettent au point des méthodes qui vont permettre, pour la première fois, de déterminer avec précision les régions du cerveau, et les cellules nerveuses de ces régions, qui sont la cible des médicaments contre la schizophrénie. Ils espèrent être bientôt capables d'identifier avec précision les structures cérébrales qui servent de médiateurs tant aux effets thérapeutiques qu'aux effets secondaires indésirables de ces médicaments. Selon eux, leur projet de recherche peut leur permettre non seulement d'améliorer les connaissances dans le domaine de la pathophysiologie de la schizophrénie, mais aussi d'ouvrir la voie à la mise au point d'un système qui permettra de trouver rapidement et avec précision des nouveaux médicaments antipsychotiques exempts des effets secondaires graves inhérents à la plupart des médicaments actuellement en usage.

Université Dalhousie : étude du métabolisme des membranes cellulaires et lutte contre les maladies du système nerveux

Une équipe de chercheurs de l'Université Dalhousie poursuit actuellement des recherches qui pourraient permettre une intervention plus efficace dans le cas d'un certain nombre de maladies, y compris les affections dégénératives du système nerveux.

Le Dr Harold Cook, directeur du Atlantic Research Centre for Mental Retardation, ainsi que ses collègues, David Byers, Frederick Palmer et Matthew Spence, veulent déterminer comment les molécules des lipides et des graisses de même que les éléments protéiniques des membranes cellulaires sont organisés et maintenus durant la croissance et le développement. Ils veulent aussi déterminer les changements qui marquent l'élaboration ou le remplacement normal de ces éléments dans certaines maladies. Ils espèrent, grâce à leurs recherches, trouver des moyens de prévenir ou d'atténuer les lésions causées aux membranes et aux cellules par certaines maladies, certaines blessures ou par le vieillissement.

Leurs recherches pourraient permettre de trouver de nouvelles façons d'intervenir plus efficacement dans un certain nombre de maladies, y compris les affections qui touchent les peroxisomes, la maladie de Niemann-Pick et les affections dégénératives du système nerveux, surtout lorsque le métabolisme des lipides est affecté. Les maladies associées aux peroxisomes englobent une vaste catégorie de troubles génétiques qui peuvent causer de l'arriération mentale et le décès à plus ou moins brève échéance.

Un étudiant et un technicien examinent un support d'électrophorèse sur gel.

La plus courante de ces maladies est l'adrénoleucodystrophie. Selon le Dr Cook, qui est professeur de pédiatrie à l'Université Dalhousie, la santé et le bien-être dépendent dans une grande mesure de l'état de chacune des cellules qui forment les tissus et les organes de l'organisme. Les fonctions de ces cellules dépendent à la fois de l'information génétique et de toute une gamme d'éléments nutritifs et de facteurs environnementaux normaux ou potentiellement nuisibles.

L'équipe se sert de méthodes d'avant-garde pour la culture de cellules prélevées chez des sujets en bonne santé et chez des patients souffrant de maladies reconnues ou de troubles héréditaires, ainsi que chez des animaux.

La plupart des travaux portent sur des cellules cutanées ou des cellules de tumeur nerveuse; on accorde une attention spéciale au cerveau et aux maladies qui touchent au système nerveux.

À ce jour, les chercheurs ont découvert que de nombreux processus d'assemblage et de dégradation des lipides dans la cellule, notamment les processus de formation et d'entreposage du cholestérol, de modification des « chaînes latérales » d'acides gras non saturés et de synthèse des phospholipides à partir de molécules d'éléments nutritifs de base, comportent, sur le plan de la structure des membranes, des processus qui évoluent et sont reliés entre eux de façon complexe.

Les signaux qui frappent la surface des cellules, y compris les éléments nutritifs, les hormones, les molécules transmettrices des cellules nerveuses et les facteurs de croissance, provoquent une série de réactions à l'intérieur de la cellule. Les chercheurs étudient ces changements chez certains types particuliers de cellules cérébrales et cutanées, chez des sujets normaux, chez des sujets malades et chez des sujets recevant des médicaments.

Une équipe de McGill espère réduire les infections qui frappent les opérés particulièrement exposés

Le Dr Nicolas Christou, à droite, en compagnie d'un patient, tient un sac de solution nutritive; cette solution a été administrée au patient dans le but d'améliorer son système immunitaire avant une intervention chirurgicale.

À l'hôpital Royal Victoria de Montréal, on effectue des recherches en vue de réduire l'incidence des infections et autres complications potentiellement mortelles qui frappent certains opérés particulièrement exposés.

Une équipe de chercheurs, sous la direction du Dr Nicolas Christou, étudie le système immunitaire de patients qui doivent subir une intervention chirurgicale, afin de déterminer leur capacité de résister aux infections après une intervention ou une blessure.

Selon le Dr Christou, qui est professeur agrégé de chirurgie à l'Université McGill, certains patients, qui entrent à l'hôpital pour une intervention non urgente ou à cause d'un accident, sont moins en mesure que d'autres de résister aux infections.

Lorsqu'une infection se déclare, certains patients sont plus sujets à y succomber que d'autres. « Ces infections coûtent cher à la société » déclare le Dr Christou, « parce que dans certains cas le séjour à l'hôpital est prolongé, généralement dans une unité de soins intensifs. Bien entendu, ce qu'il en coûte au patient qui meurt se passe de commentaire. »

L'équipe se compose des Docteurs Julius Gordon, Jonathan Meakins, Carl Nohr et Harold Rode, tous de l'Université McGill. Ces derniers ont constaté qu'ils sont capables d'identifier les patients qui sont particulièrement exposés à mourir d'une infection majeure à l'hôpital, grâce à un simple test fait à l'aide d'antigènes injectés sous la peau, semblables à ceux utilisés pour les bilans allergologiques. Ce test d'hypersensibilité retardée permet de reconnaître les patients à risque, en identifiant ceux dont le système immunitaire présente des anomalies. Les patients qui réagissent aux tests se comportent bien face à l'infection et survivent. Toutefois, 75 pour cent de ceux qui ont une réaction cutanée négative et qui sont victimes d'une infection grave, meurent des complications de cette infection. Les chercheurs croient que s'ils peuvent en arriver à comprendre la cause de la défaillance du système immunitaire, il sera possible

d'adapter le traitement et d'améliorer les chances de survie des patients qui sont victimes d'une infection grave à l'hôpital.

L'équipe étudie également comment les anomalies du système immunitaire agissent avec d'autres systèmes ou appareils, comme l'appareil cardio-respiratoire, qui ont un rôle à jouer dans la lutte du patient contre l'infection. Par exemple, chez certains patients les carences nutritionnelles peuvent entraîner une altération des réactions immunitaires. Dans le but de corriger ces carences, on administre à ces patients une solution spéciale par voie endoveineuse.

Ces chercheurs étudient également des façons de régulariser la fonction d'un certain type de leucocytes qui, chez des patients anergiques, peuvent réagir de façon exagérée à une infection et digérer non seulement les bactéries responsables de l'infection, mais aussi les tissus normaux, tels que les poumons et les vaisseaux sanguins des muscles.

Ils étudient aussi des moyens de rétablir la fonction des lymphocytes B qui produisent des anticorps s'opposant aux bactéries attaquant l'organisme; ces lymphocytes B ne fonctionnent pas normalement chez les patients anergiques. Enfin, ils étudient les cellules T qui sont responsables de la régularisation du système immunitaire, mais qui, pour une raison ou pour une autre, ne fonctionnent pas normalement chez les personnes anergiques.

Des chercheurs de l'Université McGill étudient les mécanismes du système de défense complexe de l'organisme

Des recherches actuellement en cours à l'Université McGill visant à mieux comprendre les mécanismes du système complexe de défense de l'organisme devraient se révéler utiles dans les domaines des maladies autoimmunes et des greffes d'organes.

Sous la direction du Dr Ronald Guttmann, une équipe de chercheurs étudie le rôle du système immunitaire et du système majeur d'histocompatibilité dans les domaines des maladies autoimmunes et de la transplantation d'organes. Les autres membres de l'équipe sont les Docteurs Eleanor Colle, Abraham Fuks et Gérald Prud'homme.

À l'heure actuelle, il faut administrer des immunosuppresseurs non spécifiques au receveur pour que son organisme accepte les greffes de tissu et d'organe. Toutefois, la tolérance à la greffe, sans épisode de rejet, constitue toujours un problème majeur.

L'équipe de McGill a étudié comment les lymphocytes qui ont une action suppressive naturelle peuvent empêcher les rejets, et elle a montré que ces lymphocytes existent en grand nombre dans les reins des greffés qui reçoivent des immunosuppresseurs.

Actuellement, les membres de l'équipe étudient comment les cellules suppressives naturelles suppriment la réponse des cellules T et comment, à long terme, elles peuvent agir sur la greffe.

Ils se demandent si la suppression non spécifique des autres réactions immunitaires ne pourrait pas, à longue échéance, entraîner certaines complications chez les greffés, comme des infections et le cancer.

Chez les patients qui ont reçu une greffe de moelle osseuse, la réponse immunitaire de la greffe à l'endroit du receveur peut provoquer une réaction du greffon contre l'hôte qui peut être mortelle. À l'aide d'un modèle expérimental, les membres de l'équipe ont montré que la cyclosporine, qui est un médicament antirejet, a des effets divergents, c'est-à-dire qu'elle peut, selon

la dose, favoriser la suppression des clones des lymphocytes T, tout en empêchant le développement de l'anergie des clones de ces lymphocytes ou diminuer la sensibilité aux antigènes spécifiques.

Bien que les effets sur le plan de l'anergie puissent être nuisibles en favorisant l'autoimmunité, faciliter la suppression clonale est bénéfique et constitue le premier exemple de tolérance spécifique par suppression clonale produite par un médicament.

Ces effets de la cyclosporine peuvent avoir des répercussions importantes sur le plan clinique; la modulation de la tolérance, à l'aide de médicaments, est un projet parmi plusieurs sur la tolérance, menés actuellement par des membres de l'équipe qui travaillent dans le domaine de la transplantation.

Les chercheurs étudient aussi actuellement la pathogénie du diabète de type 1 et analysent l'antigène des cellules insulaires qui stimule des réponses auto-agressives de la part des lymphocytes T.

Ils ont identifié une protéine qui stimule les clones auto-agressifs des lymphocytes T; la caractérisation de cet antigène constituerait un progrès majeur. Leurs études sur un modèle de diabète chez des animaux portent à croire qu'au moins trois gènes sont nécessaires pour que la maladie se développe pleinement. Les chercheurs de l'équipe croient que leurs recherches leur ont fourni un cadre pour comprendre la génétique de la maladie chez les humains, où un important allèle d'histocompatibilité « permissif » est aussi nécessaire pour que le terrain soit propice à la maladie. On appelle allèle chaque gène faisant partie d'une série de gènes qui peuvent occuper des locus homologues sur un chromosome. Le Dr Guttmann travaille au Centre d'immunologie et de transplantation de l'Université McGill; le Dr Colle est attaché à l'Hôpital pour enfants de Montréal; le Dr Fuks travaille au Centre sur le cancer de l'Université McGill et le Dr Prud'homme, au département de pathologie de l'Université McGill.

Une équipe de l'Université McGill cherche différents types de marqueurs pour le cancer

Une équipe de l'Université McGill effectue des recherches dans le but de trouver des « marqueurs » qui pourraient permettre de détecter la présence de différents types de cancer dès le début de la maladie. Sous la direction du Dr Cliff Stanners du Centre du cancer de l'Université McGill, l'équipe étudie le rôle de l'antigène carcinoembryonnaire (ACE) qui appartient à une famille de molécules apparaissant à la surface de diverses cellules cancéreuses, y compris celles qui se manifestent dans les sites les plus courants, comme le colon, le sein et le poumon.

L'ACE est largement utilisé aujourd'hui comme marqueur de tumeur, pour le traitement du cancer de l'intestin. Toutefois, jusqu'à récemment, la nature précise et l'étendue de la famille de molécules n'étaient pas connues. En outre, la fonction normale de ces molécules et la pertinence de leur présence sur les cellules cancéreuses, en ce qui concerne le processus de transformation du cancer, étaient tout à fait inconnues.

Il y a cinq ans, l'équipe, ainsi que d'autres laboratoires, ont cloné le gène de l'ACE, ce qui a permis de caractériser avec précision l'ACE et les membres de sa famille. Le gène cloné a servi de sonde spécifique pour déterminer exactement quels membres de la famille font l'objet d'une surproduction et dans quelles tumeurs. En plus d'utiliser cette information pour mettre au point

d'autres marqueurs spécifiques pour d'autres types de cancer, les chercheurs se sont servis du gène cloné de l'ACE pour étudier les fonctions possibles de l'ACE. Jusqu'à ce jour, ils ont montré qu'il peut faire adhérer spécifiquement des cellules ensemble et ainsi agir comme molécule d'adhésion intercellulaire. Les caractéristiques de ce processus d'adhésion varient considérablement selon les différents membres de la famille de l'ACE et sont interprétées dans le but de jeter de la lumière sur le fonctionnement normal de l'ACE et des membres de sa famille.

Comme les molécules d'adhésion sont responsables de la fidélité de l'organisation des cellules dans la formation des tissus, la production anormale de ces molécules peut bouleverser l'organisation normale des tissus et contribuer au développement de cellules cancéreuses désorganisées. Enfin, on a déjà constaté que les molécules d'adhésion peuvent contribuer au processus d'invasion et à la métastase ou transport du cancer dans d'autres points de l'organisme.

L'équipe étudie actuellement le rôle possible de l'ACE dans ce genre de propriétés cellulaires, tant dans les tissus normaux que les tissus cancéreux.

Outre le Dr Stanners, l'équipe est composée des Docteurs Abraham Fuks et Nicole Beauchemin.

Une équipe de l'Université McMaster cherche de nouveaux traitements pour les troubles gastrointestinaux

De nouvelles approches face au traitement des troubles gastrointestinaux (GI) pourraient découler des recherches actuellement en cours à l'Université McMaster.

Une équipe de chercheurs, sous la direction du Dr Edward Daniel, étudie les mécanismes qui contrôlent la motricité gastrointestinale tant dans l'organisme sain que dans l'organisme malade. Au cours de la dernière année, l'équipe a recueilli de nouvelles informations au sujet du rôle de certaines cellules, peu nombreuses mais critiques, appelées cellules interstitielles de Cajal. Ces cellules sont électriquement reliées à la musculature lisse et les chercheurs ont trouvé des preuves qu'elles sont les stimulateurs de la motricité GI.

« Nous croyons que lorsque ces cellules sont absentes ou qu'elles fonctionnent mal, la motricité gastrointestinale ne suffit pas à transporter les produits de la digestion et qu'il s'ensuit de la distension, de la douleur, de la constipation et même la mort », explique le Dr Daniel, qui ajoute que jusqu'à ce jour, les modifications subies par ces cellules dans certains troubles comme l'achalasie, la maladie de Hirschsprung ou la sténose du pylore, n'ont jamais été étudiées.

Le Docteur Jan Huizinga, membre de l'équipe de l'Université McMaster.

Son équipe se réjouit également d'une autre découverte, à savoir que l'oxyde nitrique pourrait être un médiateur inhibiteur du système nerveux entérique. Longtemps, la plupart des scientifiques ont soutenu que le médiateur concerné était un important neurotransmetteur, le polypeptide intestinal vasoactif (PIV). Les chercheurs étudient également les mécanismes de contrôle en cause dans la libération du PIV et ses conséquences sur la motricité.

Leurs recherches ont mis à jour un contrôle complexe de la libération du PIV, qui fait que lorsque cette libération est grande la motricité gastrointestinale est absente, tandis que lorsque la libération du PIV est non existante on constate généralement, mais pas toujours, une augmentation de la motricité et de la motilité dans l'intestin.

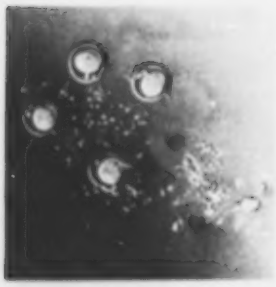
Les autres membres de l'équipe sont les Docteurs Nicholas Diamant, Jo-Ann Fox, Thomas McDonald et Jan Huizinga.

Des chercheurs de l'Université de Montréal veulent mettre au point des vaccins contraceptifs

Grâce aux travaux d'une équipe de l'Université de Montréal, une ou plusieurs formes de vaccins contraceptifs pourraient exister d'ici la fin du siècle.

Cette équipe de chercheurs, dirigée par le Dr Gilles Bleau, travaille au Centre de recherche de l'hôpital Maisonneuve-Rosemont, qui est affilié à l'université; ils y travaillent à un vaste projet de recherche sur la stérilité masculine et féminine, la contraception, le développement de l'embryon, l'hyperplasie et le cancer de la prostate.

Dans le domaine de la contraception, les chercheurs tentent de mettre au point un vaccin antifécondité qui agirait contre deux protéines des gamètes, récemment découvertes. La première est une protéine épididymaire associée au sperme et la seconde, une protéine de la trompe de Fallope, associée à l'œuf.



Ovocytes fertilisés. Les vaccins contraceptifs à l'étude ont pour but d'inhiber la fertilisation.

Selon le Dr Bleau, professeur agrégé d'obstétrique et de gynécologie, « ces deux nouvelles cibles ont de bonnes chances de mener à l'élaboration du contraceptif des années 2000 ».

Au cours de ses recherches, en vue de trouver de nouvelles approches diagnostiques et thérapeutiques face à la stérilité féminine et masculine, l'équipe a étudié la production et la maturation des gamètes, le processus menant à la fécondation de l'œuf et au développement de l'embryon jusqu'au moment de l'implantation dans l'utérus. Chez l'homme, ils étudient la fonction de l'épididyme, puisque c'est pendant le passage à travers cet organe qu'est modifiée la composition protéinique et lipidique des spermatozoïdes et qu'augmente leur densité intrinsèque.

« Nous croyons que ces processus de maturation sont de bons indicateurs de la capacité de fécondation des spermatozoïdes et un moyen fiable de déterminer la fécondité masculine » souligne le directeur. Au cours d'une étude pilote, effectuée récemment, l'équipe a constaté une importante amélioration de la qualité des spermatozoïdes chez des hommes stériles à qui on avait administré des suppléments de sélénium et de vitamine E.

Dans le cadre de leur travail sur la stérilité féminine, les chercheurs mettent l'accent sur l'oviductine, une protéine qui est sécrétée par la trompe de Fallope et qui s'associe à l'ovule.

Selon eux, il est possible que cette protéine supporte et protège le jeune embryon et contribue à protéger la trompe de Fallope contre les maladies qui sont souvent la cause de la stérilité féminine et de grossesses extra-utérines potentiellement mortelles.

Le cancer de la prostate vient au deuxième rang des tumeurs malignes les plus courantes chez les hommes. Les hommes âgés souffrent aussi d'une hyperplasie ou hypertrophie bénigne de la prostate, trouble qui s'accompagne d'une obstruction plus ou moins marquée de l'orifice urétral. Les chercheurs essaient d'expliquer les mécanismes cellulaires qui sont à l'origine de la croissance normale ou anormale de cette glande. Ils croient que la prostate est stimulée par un facteur de croissance prostatique (FCP) qui agit par l'intermédiaire d'un présumé complexe récepteur du facteur de croissance, qui met en jeu une nouvelle forme d'activité de la tyrosine-kinase. Ils purifient et analysent tant le

FCP que la kinase. Dans le cadre de leurs recherches, les chercheurs étudient les modes d'action du FCP et espèrent pouvoir synthétiser des analogues du FCP et produire des antagonistes du récepteur, en vue de prévenir et traiter l'hyperplasie bénigne et le cancer de la prostate.

Les autres membres de l'équipe sont les Docteurs Alcide Chapdelaine, Simone Chevalier, Kenneth Roberts et Robert Sullivan.

Des chercheurs de l'Université de Montréal étudient de nouveaux médicaments contre la douleur

Des chercheurs de l'Université de Montréal tentent de mettre au point de nouveaux agents contre la douleur, qui pourraient réduire ou même éliminer les problèmes de tolérance et d'accoutumance qui sont des effets secondaires courants de la morphine et de certaines autres drogues.

Le Dr Philippe Crine dirige un projet du CRM qui a pour but d'étudier les processus fondamentaux associés aux facteurs qui régularisent les effets de certains peptides naturels produits dans l'organisme et qui ont des propriétés morphinomimétiques. Selon le Dr Crine, les effets de ces peptides, connus sous les noms d'enképhalines et d'endorphines, sont dans une grande mesure régularisés par des facteurs qui influent sur la production de ces peptides, sur leur acheminement vers le site où se font sentir leurs effets et sur leur dégradation subséquente. Les recherches effectuées par son équipe ont pour but d'essayer de comprendre ces processus fondamentaux. Pour ce faire, les chercheurs utilisent des modèles simplifiés de cellules qui ressemblent, dans une certaine mesure, aux neurones du cerveau. À l'aide de techniques de manipulation génétique ils introduisent des gènes dans ces cellules afin de produire des neuropeptides synthétiques. Ils espèrent apprendre comment ces neuropeptides sont fabriqués avant d'être rassemblés dans de minuscules sacs appelés neurovésicules.

Ils croient que ce processus « d'emballage » est probablement crucial pour ces neuropeptides, les neurovésicules étant l'endroit où les peptides sont mis en action et entreposés avant d'être sécrétés et d'agir sur la douleur et l'humeur.

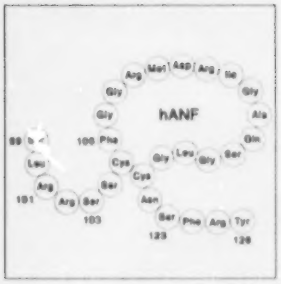
Les chercheurs étudient également la structure d'un enzyme responsable de la dégradation des peptides opioïdes. En inhibant ces enzymes avec des drogues, il est possible de produire une analgésie. Ils espèrent qu'avec une meilleure connaissance de leur structure, il sera possible de synthétiser des inhibiteurs plus spécifiques, qui pourront soulager la douleur tout en évitant les problèmes de tolérance et d'accoutumance qui accompagnent la morphine et même les peptides opioïdes naturels.

Les autres membres de l'équipe sont les Docteurs Guy Boileau et Luc DesGroseillers.

Une équipe de l'Université de Montréal étudie les hormones cardiaques

Un programme de recherche en cours à l'Institut de recherches cliniques de l'Université de Montréal pourrait produire d'importantes informations au sujet des causes des maladies cardiovasculaires et de leur traitement efficace.

Les Docteurs André De Léan, Jacques Drouin, Mona Nemer et Huy Ong étudient la génétique et la pharmacologie des peptides natriurétiques auriculaires (lPNA). Ces substances constituent une famille qui ne cesse de grandir; pour le moment, celle-ci comprend trois gènes distincts, quoique apparentés,



La structure moléculaire du facteur natriurétique auriculaire, une hormone importante isolée dans le tissu cardiaque.

qui se manifestent surtout au niveau du coeur et des systèmes nerveux central et périphérique. Le plus connu est le facteur natriurétique auriculaire (FNA), une hormone qui a été isolée à partir de tissu cardiaque. Les peptides auriculaires sont des agents puissants qui dilatent ou ouvrent les vaisseaux sanguins; ce sont aussi des inhibiteurs du système rénine-angiotensine, de même que des natriurétiques et des diurétiques.

On trouve aussi ces peptides dans le cerveau où ils semblent être associés à la régulation de la soif et à la production de l'hormone antidiurétique vasopressine.

Selon le Dr De Léan, des études sur la pharmacologie et la biologie moléculaire de ces hormones polypeptidiques sont essentielles si l'on veut comprendre, sur le plan moléculaire, leur rôle dans la régulation de l'homéostasie cardiovasculaire et dans l'étiologie et le traitement des maladies cardiovasculaires. De plus, les sites de l'action de ces peptides sont aussi la cible de nouveaux agents thérapeutiques qu'on met actuellement au point.

Les succès remportés sur les plans du clonage de gènes de PNA et de l'isolation et du clonage des récepteurs, entre autres développements, ont permis à l'équipe de s'attaquer à d'autres questions touchant la régulation des hormones cardiaques et les mécanismes de signalisation cellulaire qui assurent leurs effets biologiques, tant chez les sujets normaux que chez les sujets malades.

Les chercheurs de l'équipe croient que la combinaison fructueuse d'études sur les hormones cardiaques et sur leurs récepteurs, tant sur le plan protéinique que génique, permettra d'obtenir une compréhension plus complète et détaillée de leurs propriétés moléculaires.

Le clonage du gène en vue d'obtenir de nouveaux peptides cardiaques, associé à une étude pharmacologique des facteurs qui régularisent sa biosynthèse, permettra aux chercheurs de comprendre les facteurs spécifiques aux tissus qui régularisent chacun à sa façon l'action des différentes hormones cardiaques.

Projet à l'Université de Montréal sur les maladies du foie et une meilleure conservation de cet organe

Une équipe de chercheurs de l'Université de Montréal a recueilli, sur les fonctions hépatiques, des données nouvelles qui pourraient donner lieu à un meilleur traitement des maladies du foie et à une meilleure préservation de cet organe pour la transplantation. Le Dr P.-Michel Huet, directeur du Centre de recherche clinique André-Viallet de l'Hôpital Saint-Luc, coordonne un important projet dans le cadre duquel une équipe de chercheurs étudie les diverses fonctions hépatiques, y compris la capacité de régénération du foie.

L'un des membres de cette équipe, le Dr Marielle Gascon-Barré, étudie les effets des rapports qui existent entre le calcium et la vitamine D au cours du processus de régénération hépatique. Le foie est un organe exceptionnel qui, dans les minutes qui suivent une blessure ayant entraîné une perte de masse fonctionnelle, génère tous les mécanismes requis pour sa régénération. Bien qu'on ne connaisse pas encore la réaction cellulaire qui déclenche ce mécanisme de croissance compensatoire, il semble que le calcium ainsi que plusieurs hormones et facteurs de croissance jouent un rôle essentiel dans ce processus. L'équipe du Dr Gascon-Barré a récemment émis une hypothèse selon laquelle

Foie cirrhosé prélevé chez un sujet qui a reçu une greffe du foie, au cours d'études de perfusion in vitro.

l'hormone du système endocrinien de la vitamine D jouerait un rôle clé dans cette régénération du foie.

Les autres projets de l'équipe, qui sont menés par le Dr Huet et par le Dr Jean-Pierre Villeneuve, ont pour but d'étudier les effets des maladies hépatiques chroniques, comme la cirrhose; ils veulent trouver de nouvelles méthodes de traitement. La cirrhose est une maladie du foie, chronique et évolutive, qui entraîne souvent la mort. Elle est due non seulement à une consommation excessive d'alcool, mais aussi à d'autres facteurs, comme les anomalies génétiques, les infections à virus, les toxines et autres. Dans certains cas de maladie du foie à la phase terminale, la transplantation constitue le seul traitement efficace.

Le Dr Villeneuve étudie les modifications qu'entraîne la cirrhose sur le plan du métabolisme dans le foie. L'une des principales fonctions du foie consiste à débarrasser l'organisme de certaines substances, comme les hormones, les acides biliaires, les acides gras, les médicaments et les toxines. Dans les cas de cirrhose, le rôle métabolique du foie est réduit, mais on ne connaît pas bien les mécanismes qui sont à l'origine de cette réduction.

Pour élucider ce problème, le Dr Villeneuve compare deux théories (la théorie de la cellule saine et la théorie de la cellule malade); les résultats de cette comparaison pourraient modifier en profondeur les hypothèses admises jusqu'à ce jour au sujet de l'insuffisance hépatique dans les cas de cirrhose.

Le Dr Huet, dont le projet porte entre autres sur la transplantation, étudie les mécanismes qui sont à l'origine des modifications subies par le foie entre le moment où il est prélevé de l'organisme du donneur et celui où il est transplanté chez le receveur. Le Dr Huet est d'avis que si l'on doit considérer la transplantation comme une forme de traitement acceptable et efficace pour les patients souffrant d'une atteinte hépatique au stade terminal, le principal problème auquel nous faisons face aujourd'hui est la préservation de cet organe.

Entre le prélèvement du foie et sa transplantation, il existe plusieurs stades qui peuvent modifier le sort de l'organe après la greffe. Par ses études, le Dr Huet espère déterminer les interactions que peuvent entraîner les modifications subies par chaque population cellulaire hépatique, dans la réponse ultime de l'organe au moment de la reperfusion.

Grâce à une autre subvention du CRM, les Docteurs Gascon-Barré et Roger Butterworth ont acheté le spectromètre de fluorescence X à double faisceau avec microscope le plus perfectionné. Ils utilisent cet appareil pour déterminer la réponse du calcium intracellulaire hépatique face à divers stimulus hormonaux, aux facteurs de croissance et, dans un avenir prochain, à l'ischémie.

À l'institut de recherches cliniques de Montréal on cherche de nouveaux agents contre l'athérosclérose

Des recherches effectuées à l'Institut de recherches cliniques de Montréal pourraient permettre de trouver de nouveaux agents contre l'athérosclérose coronarienne, une des principales causes de crise cardiaque, d'accident vasculaire cérébral et d'autres maladies des vaisseaux sanguins.

Une équipe de chercheurs, sous la direction du Dr Yves Marcel, étudie le mécanisme et la fonction d'un certain nombre de lipoprotéines, complexes multimoléculaires qui se servent des propriétés de certaines protéines pour transporter les lipides, ou les acides gras, dans tout l'organisme.

Le Dr Marcel et le Dr Ross Milne et ses collègues, ainsi que le Dr Eric Rassart de l'Université du Québec à Montréal, déterminent et définissent les aspects spécialisés des apolipoprotéines, surtout un type, dont le principal rôle consiste à transporter les triglycérides.

Malheureusement, dit le Dr Marcel, chez l'homme cette protéine reste dans la circulation et devient le véhicule qui sert au transport du cholestérol dans une lipoprotéine appelée LDL, ou protéine de basse densité, qui joue un rôle de premier plan dans la constitution de l'athérosclérose coronarienne. Récemment, le Dr Milne et ses collègues ont délimité l'aire de l'apolipoprotéine B (apoB) qui permet la capture des LDL par les récepteurs des cellules. La parfaite connaissance de ce phénomène permettrait de comprendre comment se fait la liaison entre la LDL et son récepteur et peut-être même de mener à la mise au point d'agents capables de stimuler cette liaison, ce qui permettrait d'accélérer la dégradation de la LDL par le foie.

La LDL distribue les graisses et le cholestérol dans toutes les cellules par l'intermédiaire des protéines apoB, qui se fixent à un récepteur des cellules cibles. Comme les cellules utilisent le cholestérol LDL pour leur propre maintien, seul l'excès de cholestérol LDL est considéré comme « mauvais » et nuisible.

Toutefois, d'autres lipoprotéines, comme les HDL ou lipoprotéines de haute densité, sont considérées comme bénéfiques et comme des porteuses de « bon cholestérol ».

On croit que la HDL exerce son action protectrice contre l'athérosclérose en retirant des cellules l'excès de cholestérol et en ramenant ce dernier au foie où il est dégradé. L'équipe du Dr Marcel étudie la principale protéine des HDL, l'apoA-1, qui joue un rôle clé dans le mécanisme d'élimination du cholestérol.

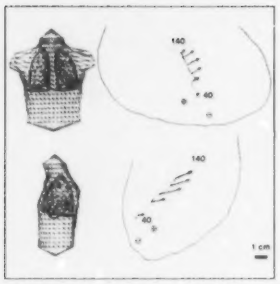
Les chercheurs étudient également la protéine porteuse des esters de cholestérol, autre protéine essentielle au transport du cholestérol. Cette substance contrôle un important « carrefour » dans le transport du cholestérol, en éloignant le cholestérol des HDL. Dans ce domaine, leurs recherches ont pour but de leur permettre de comprendre comment le code génique de la protéine est étroitement lié aux mouvements du cholestérol dans l'organisme.

Le Dr Rassart dirige un projet qui porte sur l'étude d'une autre protéine, l'apoD, dont le gène apparaît dans de nombreux tissus où il semble que cette protéine serve au transport de petites molécules, notamment le cholestérol et certaines hormones hautement spécialisées, comme la progestérone et la prégnénolone.

Des chercheurs de l'Université de Montréal étudient les troubles de l'excitabilité cardiaque

La recherche de méthodes améliorées de diagnostic et de traitement visant à prévenir les complications chez les patients qui souffrent de troubles de l'excitabilité cardiaque fait partie des objectifs d'un projet de recherche en cours à l'Université de Montréal.

Sous la direction du Dr Fernand Roberge, une équipe de scientifiques appartenant à diverses disciplines, cherche à mieux comprendre les maladies cardiovasculaires, en particulier les anomalies de l'excitabilité cardiaque et les arythmies. Ces anomalies sont associées à des problèmes organiques, comme dans les crises cardiaques, à des malformations de tissus comme dans le syndrome



Dépistage, par des moyens non invasifs, du site de l'excitabilité cardiaque. La position, l'ampleur et l'orientation de la source d'un courant dipôlaire sont évaluées de façon à ce qu'il soit possible de simuler, sur un modèle, une répartition identique à celle constatée sur le torse du sujet.

de Wolff-Parkinson-White et à des irritations d'origine hormonale ou métabolique qui provoquent de la tachycardie ou de l'arythmie.

Outre les techniques de cartographie et d'électro-entraînement mises au point dans leur laboratoire d'instruments biomédicaux, les chercheurs se servent largement de modèles informatisés, dans le but de combiner des connaissances et des données relatives aux molécules, aux cellules et aux tissus, à des observations du cœur battant. Cela leur permet d'utiliser des méthodes non invasives pour indiquer avec précision les anomalies de l'excitabilité cardiaque, déterminer le site de leur origine et pour suivre leurs effets tout au long de la révolution cardiaque. Jusqu'à ce jour, ils ont pu situer et caractériser avec exactitude les voies accessoires du syndrome de Wolff-Parkinson-White et le centre de l'automaticité anormale dans certains cas de tachycardie ventriculaire, où il y a trouble du rythme dans les ventricules.

Les cardiologues se servent de techniques informatisées pour évaluer l'efficacité de la « stimulation » électrique du cœur et des médicaments utilisés pour traiter ces affections.

Selon le Dr Roberge, ces recherches devraient permettre une meilleure connaissance des facteurs fonctionnels et structuraux qui régissent l'excitabilité cardiaque, la transmission des impulsions électriques et la production des contractions dans le tissu cardiaque.

« De cette façon, nous espérons être en mesure de mettre au point des méthodes de diagnostic et de traitement plus perfectionnées, conçues pour certains troubles de l'excitabilité cardiaque et qui permettent de s'attaquer aux principales causes de ces troubles et, par conséquent, d'empêcher les complications. »

L'équipe est aussi composée des Docteurs René Cardinal, Ramesh Gulrajani, Robert LeBlanc, Réginald Nadeau et Pierre Pagé, tous de l'Université de Montréal, ainsi que de Robert Guardo et Pierre Savard de l'École Polytechnique de Montréal, qui est affiliée à l'Université.

Une équipe de recherche de Montréal étudie les effets du vieillissement sur la fonction cérébrale

Des recherches actuellement en cours au Centre de recherche de l'Hôpital Côte-des-Neiges de Montréal ont permis de recueillir de nouvelles données sur les effets du vieillissement sur la fonction cérébrale.

Sous la direction du Dr André Roch Lecours, une équipe de chercheurs appartenant à diverses disciplines mène un vaste programme de recherche portant sur les rapports entre la fonction cérébrale et les modes de comportement. Les démences de type Alzheimer et les affections cardiovasculaires sont les principales maladies visées par le programme.

Les chercheurs tentent, entre autres, de mieux connaître les mécanismes cognitifs et neurobiologiques propres au vieillissement avancé du cerveau. Ils espèrent, grâce à leurs travaux, être en mesure de trouver des méthodes de dépistage précoce, de diagnostic et même, un jour, de prévention de la détérioration de la fonction cérébrale causée par la démence et les troubles cardiovasculaires.

Ils espèrent également améliorer les méthodes de réadaptation cognitive des maladies cardiovasculaires, et évaluer les pharmacothérapies nouvelles et futures.

Le programme comprend huit projets qui sont axés sur l'étude de la sénescence et des maladies qui agissent sur l'attention, la perception, la mémoire, le langage et les mouvements volontaires.

L'équipe a observé, entre autres, que les démences de type Alzheimer peuvent nuire à presque toutes les capacités intellectuelles ou modifier les fonctions cognitives comme la mémoire, le langage ou l'orientation temporo-spatiale. Si, par exemple, un aspect particulier de la sphère cognitive est profondément modifié, la démence qui en résulte peut produire des symptômes cliniques qui touchent au langage et provoquent une modification profonde de l'évocation des mots, mais sans toutefois nuire à l'enchaînement des mots dans la formation des phrases.

Les chercheurs ont aussi contribué à découvrir que chez les humains, la mémoire est composée d'un ensemble de systèmes en interaction, dont certains régressent normalement avec l'âge, tandis que d'autres ne sont pas touchés.

Selon l'équipe de l'Hôpital Côte-des-Neiges, le vieillissement normal ne nuit pas à la capacité de faire certains types de mouvements volontaires, comme de manipuler des objets. Toutefois, d'autres types de facultés, comme la capacité de mimer et de dessiner, sont parfois touchées, même en l'absence de toute forme de trouble cérébral repérable, de telle sorte que le comportement qui en résulte pourrait être considéré comme les symptômes d'une maladie cérébrale focale chez un adulte plus jeune.

Les chercheurs ont découvert que le vieillissement normal peut modifier presque tous les types de comportement du langage, comme la formulation, la répétition, la lecture à haute voix et l'écriture sous la dictée, qui sont toutes des caractéristiques que les cliniciens peuvent utiliser pour évaluer et diagnostiquer les troubles de la parole. Ils soulignent que le langage change avec le temps et que dans certains cas, on a l'impression que ces changements indiquent la présence d'une maladie, alors qu'il n'en est rien. Selon eux, le vieillissement normal ne devrait pas être considéré automatiquement comme le signe d'une maladie.

Leurs études ont aussi montré que l'hémisphère droit, qu'on dit « mineur », non seulement possède ses propres capacités de communication, mais que son intégrité est peut-être elle aussi essentielle au maintien de l'interface entre le sens de la pensée transmise par la communication (la sémantique) et la forme (les mots et le langage) que prend cette pensée.

L'équipe est aussi composée des Docteurs Yves Joanette, Jean-Luc Nespoulous, Isabelle Peretz et John Ryalls, tous de l'Université de Montréal; Daniel Bub de l'Université McGill et Eric Keller de l'Université du Québec à Montréal. Le Centre de recherche de l'Hôpital Côte-des-Neiges est affilié à l'Université de Montréal.

Institut de recherches cliniques de Montréal : études d'importantes fonctions cérébrales dont mémoire et comportement

Une équipe de l'Institut de recherches cliniques de Montréal cherche de nouvelles données au sujet d'importantes fonctions cérébrales, comme la mémoire et le comportement.

Cette équipe, dirigée par le D[r] Nabil Seidah, étudie l'importance de certaines protéines dans la fonction cérébrale; ses travaux pourraient se révéler utiles un jour sur le plan clinique. Les chercheurs espèrent obtenir des données

au sujet de la diversité, de l'expression, de l'hydrolyse et de la fonction des protéines nerveuses et neuroendocrines que l'on trouve parmi les innombrables molécules cérébrales, qui agissent en harmonie à travers le circuit des milliards de cellules nerveuses du cerveau.

Selon le Dr Seidah, ces protéines comprennent les convertases, qui sont des enzymes qui convertissent les protéines précurseurs en produits actifs ainsi qu'en facteurs sécrétoires et transcriptionnels associés au fonctionnement des cellules nerveuses.

Plus tôt, le Dr Seidah et son équipe ont isolé et obtenu les éléments chimiques d'une substance sérine-protéase appelée IRCM-SP1 qui brise de nombreux pro-peptides pour libérer un certain nombre d'importantes hormones cérébrales, comme ACTH, β-endorphine, enképhalines, somatostatine, facteur natriurétique auriculaire (FNA), dynorphines et insuline.

« Nous croyons que le cerveau a besoin de centaines de milliers d'éléments chimiques différents pour pouvoir réaliser la multitude de réactions simultanées qu'il doit produire », explique le Dr Seidah. Il ajoute que le système enzymatique déchiffré par son équipe constitue peut-être l'un des éléments-clés qui permettront de comprendre comment le cerveau est capable de produire toutes ces molécules. L'équipe espère purifier et caractériser les enzymes du cerveau qui sont responsables de la synthèse de milliers de molécules, découvrir de nouvelles substances cérébrales, évaluer leur rôle en tant que neuro-modulateurs ou neuro-transmetteurs présumés, et déchiffrer leur code génétique. Les autres membres de l'équipe de recherche sont les Docteurs Michel Chrétien, Claude Lazure, Majambu Mbikay et Vincent Castellucci.

INRS-Santé : étude sur les peptides et lutte contre les troubles du système nerveux

Cette colonne de chromatographie en phase inverse est utilisée pour la purification des peptides. (Services photographiques — INRS)

Des recherches effectuées actuellement par une équipe de chercheurs de l'Institut national de la recherche scientifique (INRS-Santé), de l'Université McGill et de l'Université de Sherbrooke, pourraient donner naissance à de meilleures méthodes de traitement de certains troubles des systèmes nerveux central et périphérique.

Le groupe étudie le mode d'action de deux exceptionnelles familles de peptides, les neuropeptides-tyrosine et les peptides associés au gène de la calcitonine, qui sont parmi les peptides régulateurs les plus abondants chez les mammifères. Les neuropeptides-tyrosine sont les neuropeptides les plus abondants dans le cœur et le cerveau; ce sont aussi les plus puissants stimulants de l'appétit que l'on ait vus jusqu'à ce jour chez les modèles animaux. En tant que vasodilatateurs, ou agents de dilatation des vaisseaux sanguins, les peptides associés au gène de la calcitonine sont les plus puissants jamais mis à l'essai chez l'homme et chez les animaux. Il s'agit aussi d'une substance capable de soulager la douleur nociceptive causée par l'action de fibres nerveuses sensibles à la douleur. Les neuropeptides-tyrosine et les peptides associés au gène de la calcitonine jouent tous deux un rôle dans le contrôle de l'appétit, de la mémoire, de la circulation cérébrale et périphérique, etc.

Un autre aspect du programme de recherche de l'équipe consiste à caractériser les sites récepteurs des peptides dans le cerveau et les tissus périphériques des mammifères. Les Docteurs Serge St-Pierre et Alain Fournier de l'INRS-Santé de l'Université du Québec, le Dr Rémi Quirion du Centre de recherche Douglas de l'Université McGill et les Docteurs Alain Cadieux et François Jolicoeur

de la faculté de médecine de l'Université de Sherbrooke travaillent à ce projet.

Outre l'acquisition de nouvelles connaissances au sujet de ces familles de peptides, ce projet de recherche pourrait permettre de mettre au point de meilleures stratégies de traitement pour les troubles des systèmes nerveux central et périphérique.

Au cours de la dernière décennie, de nombreux peptides ont été isolés et les chercheurs croient qu'il en reste beaucoup d'autres à découvrir. Toutefois, on possède peu de connaissances au sujet du rôle biologique d'un bon nombre d'entre eux.

Une équipe de l'Université Queen's met au point une meilleure articulation artificielle pour les arthritiques

Les personnes qui souffrent d'une forme d'arthrite grave et invalidante qui détruit les articulations pourront peut-être bénéficier des recherches sur les nouvelles articulations artificielles actuellement en cours à l'Université Queen's.

Une équipe de chercheurs appartenant au Clinical Mechanics Group et dirigée par le professeur Henk Wevers étudie le mécanisme qui est à l'origine de la destruction osseuse qui caractérise cette maladie; ils essaient de mettre au point de nouvelles articulations artificielles, plus durables et visant à faciliter la réadaptation.

« L'arthrite est cause de souffrance et d'incapacité; elle constitue un important fardeau pour notre système de santé à cause des services qu'exigent en permanence les personnes qui en souffrent », déclare le Dr Derek Cooke, orthopédiste et membre fondateur de l'équipe. Il souligne que l'arthrose est la forme d'arthrite la plus courante et qu'elle mène souvent à la destruction totale des articulations. Les prothèses actuelles ont une flexion du genou limitée, elles adhèrent mal aux tissus naturels et ont une durée de vie qui se limite à environ dix ans.

L'étude de l'alignement des jambes d'un patient souffrant d'arthrite à l'aide d'un Questor Precision Radiographic Frame fournit des renseignements sur l'ampleur de l'anomalie avant l'intervention chirurgicale ou la mise en place d'un genou artificiel.

Les membres du Clinical Mechanics Group sont d'avis que la géométrie et l'alignement des os des membres inférieurs favorisent peut-être l'arthrose en faisant porter à l'articulation du genou une pression et un poids inégaux, ce qui accélère l'usure des surfaces d'appui. Ils étudient cette hypothèse en comparant différents types d'alignement des genoux, tant pendant la marche que dans la station debout, chez des bénévoles normaux et chez des patients souffrant d'arthrose.

Ce projet de recherche, qui est financé par le CRM, a déjà ouvert la voie à une expansion dans le domaine de la technologie.

L'équipe a en effet mis au point un prototype de genou artificiel, fait de titane et de polythène de forte densité et comprenant certaines améliorations sur le plan anatomique. Cette prothèse a attiré l'attention d'un producteur de prothèses suisse. Les chercheurs espèrent qu'un jour des prothèses conçues au Canada seront fabriquées dans ce pays pour un marché nord-américain.

On procède actuellement à des essais prospectifs au cours desquels on compare deux modèles différents de prothèse complète du genou : dans un cas on retient le ligament croisé postérieur et dans l'autre, on l'élimine. On veut étudier les avantages, pour le patient, sur le plan de la capacité de marcher et de monter des escaliers, et déterminer s'il y a lieu d'améliorer la prothèse en jugeant de la pertinence de conserver ou d'éliminer le ligament croisé postérieur. Plusieurs firmes américaines spécialisées dans la construction de dispositifs chi-

rurgicaux ont commencé à collaborer avec l'équipe et lui ont apporté une aide financière.

À long terme, les chercheurs veulent améliorer les articulations artificielles en reproduisant la répartition du poids et de la tension qui se produit dans un genou naturel bien ajusté.

Les autres membres de l'équipe sont les professeurs de génie mécanique, Timothy Bryant, Carolyn Small et Urs Wyss, les orthopédistes David Pichora, John Rudan et Charles Sorbie, le professeur de physiothérapie Sandra Olney et le biostatisticien et épidémiologiste principal Benny Zee.

Une équipe de l'Université de la Saskatchewan cherche de meilleurs médicaments pour les troubles mentaux

Une équipe de scientifiques de l'Université de la Saskatchewan poursuit des études qui pourraient mener à une utilisation plus efficace et plus exacte des médicaments servant à traiter les troubles psychiatriques.

L'équipe, composée de membres des Collèges de médecine et de pharmacie et dirigée par le Dr Kamal Midha, effectue différentes études dans le but de recueillir de nouvelles données sur les doses efficaces, les nouveaux produits du métabolisme des psychotropes ainsi que la vitesse du métabolisme de ces médicaments et le mécanisme de production de leurs différents métabolites.

Dans le cadre de l'un de ces projets, les chercheurs viennent confirmer les données qui de plus en plus laissent croire que de nombreux schizophrènes tireraient profit d'une réduction contrôlée de la dose de neuroleptique qui leur est donnée. Dans bien des cas, déclare le directeur, les rares rechutes, avec leur exacerbation des symptômes schizophréniques, pourraient être enrayées par une augmentation temporaire de la dose de médicament.

L'un des plus importants avantages des doses moins élevées est la baisse de l'intensité des effets secondaires qu'entraînent de nombreux neuroleptiques.

Au cours d'études récentes, les chercheurs de l'équipe ont découvert plusieurs importants produits du métabolisme des psychotropes dans l'organisme. Ils évaluent actuellement l'importance de ces métabolites, inconnus jusqu'à ce jour. L'un des grands problèmes, selon le Dr Midha, est le fait que de nombreux psychotropes sont convertis en une foule de métabolites, dont certains contribuent à l'action thérapeutique du médicament, tandis que d'autres favorisent les effets secondaires. En outre, la vitesse et l'ampleur du métabolisme varient considérablement d'un sujet à l'autre; elles peuvent même varier selon la voie d'administration du médicament.

L'équipe a entrepris une série d'expériences à l'aide de médicaments préparés expressément pour le projet et marqués d'isotopes radioactifs inoffensifs. Ils espèrent ainsi obtenir de nouvelles données au sujet de la vitesse du métabolisme des médicaments chez les patients et au sujet du mécanisme de production des divers métabolites.

Les chercheurs étudient aussi les rapports entre les concentrations de méthylphénidate dans le sang et la réponse clinique chez les enfants hyperactifs qui souffrent d'un trouble déficitaire de l'attention. Un comprimé de méthylphénidate contient deux formes du médicament; jusqu'à ce jour, les études qui ont été faites laissent croire que la forme la moins active est métabolisée rapidement, de sorte que les concentrations de la forme plus active dans le sang sont toujours plus élevées que celles de la forme moins active. De plus, après son admi-

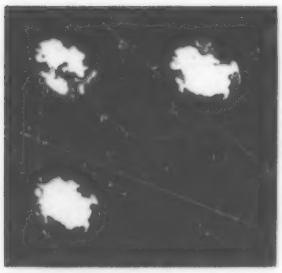
nistration, le médicament semble atteindre rapidement le cerveau, ce qui déclenche rapidement l'action thérapeutique. Certains résultats portent à croire que la forme moins active du médicament ne devrait pas être prescrite aux enfants qui mastiquent les comprimés, car la mastication détruit les propriétés inhérentes à la libération lente et peut entraîner des effets secondaires indésirables.

L'équipe est aussi composée des Docteurs Edward Hawes, Gordon McKay, John Hubbard et Elarien Korchinski, et collabore avec des chercheurs du Royal University Hospital de Saskatoon, de l'Université de Calgary, de l'Université de la Californie à Los Angeles, du Camarillo State Hospital de la Californie et de l'Université Johns Hopkins.

Hospital for Sick Children : recherches de traitement et de prévention face aux toxines dangereuses pour les reins

Les nouvelles connaissances acquises dans le cadre des recherches effectuées actuellement au Centre de recherche de l'Hôpital pour enfants malades de Toronto pourraient donner lieu à un meilleur diagnostic, un meilleur traitement et peut-être même à la prévention de la principale cause d'insuffisance rénale chez les enfants et les nourrissons.

Une équipe de chercheurs dirigée par le Dr Mohamed Karmali et comprenant également le Dr J.L. Brunton, biologiste moléculaire, et le Dr C.A. Lingwood, biochimiste, étudie la pathogenèse d'Escherichia coli vérotoxinogène et son rôle dans la maladie, surtout dans la colite hémorrhagique et le syndrome hémolitique et urémique, qui est la principale cause d'insuffisance rénale chez les enfants.



Fixation de vérotoxine fluorescente aux récepteurs des glycolipides de la membrane cellulaire sur des lymphocytes B humains, avant sa pénétration dans la cellule — image reconstruite après microscopie confocale.

Leurs études, effectuées en collaboration avec le département de microbiologie de l'Université de Toronto, portent spécialement sur le rôle et le mode d'action de la vérotoxine; on veut savoir si la connaissance du mécanisme de fixation sur les cellules sensibles peut être utilisée sur le plan clinique et si la réponse immunitaire à cette toxine joue un rôle dans l'évolution de la maladie. Il n'existe pas de façon connue de traiter ou de prévenir les affections associées à E. coli vérotoxinogène; on a aussi très peu de connaissances au sujet de leur pathogénie. Plus tôt, au cours de leurs recherches, les chercheurs on contribué à établir le rapport étiologique entre E. coli vérotoxinogène et le syndrome hémolitique et urémique; ils ont suggéré que la toxine elle-même jouait un rôle direct dans l'apparition de la maladie.

Chez les enfants, le syndrome hémolytique et urémique est particulièrement répandu après une infection à E. coli vérotoxinogène. Les chercheurs étudient le site, sur le plan sous-cellulaire, ainsi que la structure précise des récepteurs de la vérotoxine dans le tissu rénal chez les enfants, par opposition aux adultes. L'équipe a également mis au point des épreuves cliniques de fixation sur les récepteurs suffisamment sensibles pour permettre de réaliser des études épidémiologiques axées sur ces infections. Toutefois, au cœur de toutes ces études est la démonstration, par l'équipe, que la vérotoxine se fixe spécifiquement au glycolipide céramide globotriaosyl, un élément de la membrane cellulaire que l'on trouve dans les cellules sensibles.

Les vérotoxines forment une famille étroitement apparentée de protéines à sous-unités contenant cinq sous-unités B qui se fixent au récepteur, et une sous-unité A qui inhibe la synthèse des protéines dans la cellule. Les membres de cette famille de toxines se fixent à des espèces de glycolipides différentes mais apparentées. En comparant la séquence d'acides aminés et la spécificité du

processus de fixation aux récepteurs, les chercheurs de l'équipe ont visé certains acides aminés des sous-unités B qui pourraient avoir un rôle à jouer dans la spécificité de la fixation. Ils ont pu changer la spécificité de la fixation de ces toxines aux récepteurs en changeant ces acides aminés; ils étudient maintenant le résultat de ce changement sur la pathogénie observée dans les cultures de cellules et dans les modèles de maladie chez les animaux.

L'équipe purifie ces toxines mutantes et leurs phénotypes sauvages, afin d'étudier leur structure, en particulier celle de la sous-unité B, et afin de déterminer comment la fixation au récepteur est accommodée. Elle veut aussi étudier le pouvoir des mutants chez qui la fixation au récepteur a été effacée afin qu'ils puissent servir de vaccins visant à prévenir un état pathogène dû à la vérotoxine.

La toxine sert à explorer la physiologie des cellules normales dans la fonction récepteur, notamment le contrôle de la croissance des cellules dans les cultures et le développement des lymphocytes chez les humains. In vitro, les cellules du système immunitaire sont très sensibles à la toxine; elles le sont peut-être aussi in vivo. L'équipe étudie donc le rôle du récepteur dans la réponse immunitaire.

Études de la prématurité, de la croissance et du développement du fœtus dans deux centres de Toronto

De nouvelles méthodes pour prévenir les naissances prématurées et une meilleure connaissance de la croissance et du développement du fœtus sont parmi les objectifs d'un important projet de recherche mené par des scientifiques de deux centres de Toronto. Ces études sont menées par une équipe de chercheurs sous la direction du Dr Stephen Lye de l'Institut de recherche Samuel Lunenfeld de l'hôpital Mount Sinai. L'équipe est composée de spécialistes des sciences fondamentales et de recherche clinique de l'Institut et de l'hôpital général de Toronto, deux établissements affiliés à l'Université de Toronto.

Les chercheurs de l'équipe étudient la croissance et le développement des principaux organes et systèmes chez le fœtus et le nouveau-né, afin de déterminer les facteurs qui préparent le fœtus à la vie hors de l'utérus. Ils espèrent aussi mettre au point de nouvelles méthodes pour prévenir les accouchements avant terme, l'un des grands problèmes qui restent en obstétrique aujourd'hui. Bien que la proportion des naissances avant terme ne représente que de 5 à 8 pour cent des grossesses, celles-ci sont responsables de près de 85 pour cent de tous les cas de morbidité et de mortalité néonatale.

Un prématuré de 30 semaines recevant des soins dans l'unité de soins intensifs néonatals.

Selon le Dr Lye, qui est directeur de la Division de la médecine périnatale à l'Institut, « le développement fœtal et la naissance sont les périodes les plus dangereuses de notre vie. »

Le retard de croissance, la naissance avant terme, le développement inadéquat ou anormal du système nerveux central, l'incapacité pour la fonction respiratoire normale de s'établir et l'incapacité pour les ajustements cardiovasculaires de se faire à la naissance sont tous des causes de lésions graves ou de décès.

Les chercheurs vont étudier ces problèmes de développement ainsi que les ajustements profonds qui doivent être faits par le nouveau-né pour s'adapter à la vie hors de l'utérus.

L'équipe est formée d'un groupe de cliniciens et de chercheurs des départements d'obstétrique et de gynécologie, de pédiatrie et de pathologie. Ses

membres, qui appartiennent à diverses disciplines, sont spécialisés dans [illegible] développement des appareils respiratoire et circulatoire et des systèmes nerveux et hormonal.

Des chercheurs de Toronto étudient la myéline

Le Dr Arthur Roach, à gauche, et le Dr John Roder cherchent, sur une radiographie, le mRNA anti-sens chez une souris mutante.

L'acquisition de nouvelles connaissances sur le mécanisme de la sécrétion de la myéline, substance qui forme une gaine autour des fibres nerveuses, et sur la façon dont sa dégradation (dans la sclérose en plaques, par exemple) peut être évitée est le but de deux programmes de recherche menés à l'Institut de recherche Samuel Lunenfeld et à l'Hôpital pour enfants malades de To[illegible].

Des chercheurs, dont le Dr Arthur Roach de l'Institut Lune[illegible] Mario Moscarello de l'hôpital, ont combiné leurs programmes coordonn[illegible] Dr John Roder de l'Institut Lunenfeld; leur objectif est de comprendre la structure de la myéline dans le cerveau normal et le cerveau malade.

Les travaux des trois équipes sont complémentaires. Les chercheurs visent les objectifs suivants : étudier l'influence des facteurs génétiques sur la formation de la myéline en étudiant des systèmes de souris mutantes chez qui le processus de sécrétion de la myéline a été modifié; étudier le mécanisme selon lequel la myéline adhère à la fibre nerveuse et s'y associe, en étudiant les effets des changements dans l'une des protéines de la myéline (glycoprotéine associée à la myéline, une molécule d'adhésion); et étudier les mécanismes d'assemblage dans la membrane, des différentes protéines qui composent la myéline et comment leur interaction stabilise la structure de la myéline.

On a cloné les gènes des trois principales protéines de la myéline du cerveau, c'est-à-dire le protéolipide, la protéine de base de la myéline et la glycoprotéine associée à la myéline. On procède actuellement à des expériences de mutation génétique chez des animaux, afin de déterminer comment les mutations génétiques des différentes protéines peuvent modifier la chimie des protéines de la myéline et comment ces changements modifient la structure finale de la gaine de myéline. La myéline, qui est une substance graisseuse composée de membranes de cellules gliales, est essentielle au bon fonctionnement du système nerveux, car elle facilite la diffusion de l'influx nerveux à grande distance, comme dans le contrôle des muscles par les cellules nerveuses du cerveau ou l'acheminement rapide de l'information depuis les sens jusqu'au cerveau. C'est l'apparition de la myéline au cours de l'évolution qui a rendu possible le développement de systèmes nerveux complexes, comme ceux des humains.

Dans certaines maladies, comme la sclérose en plaques et la sclérose latérale amyotrophique, il y a perturbation de la structure et de la fonction normales de la gaine de myéline, ce qui produit un affaiblissement grave et, finalement le décès.

Les chercheurs ont trouvé de nouveaux signes qui laissent entendre que l'organisme tente de refaire la gaine de myéline, même dans les cas de sclérose en plaques où la démyélinisation du cerveau est massive. Selon le Dr Roder, d'autres recherches dans ce domaine montreront peut-être que cette remyélinisation est insuffisante et laisseront entrevoir des moyens de l'améliorer.

Toronto : recherches de nouveaux médicaments et de nouveaux tests pour les premiers stades des troubles psychomoteurs

Des recherches effectuées par une équipe de l'Université de Toronto pourraient mener à la découverte de nouveaux médicaments et d'épreuves de diagnostic plus précises pour les premiers stades de certaines affections psychomotrices, comme la maladie de Parkinson et la maladie d'Alzheimer.

Cette équipe, sous la direction du Dr Philip Seeman, a isolé deux gènes qui produisent des protéines réceptrices de la dopamine qui, lorsqu'elles sont stimulées, pourraient causer des hallucinations.

Les perturbations et les troubles de la pensée et des mouvements sont associés à des voies anormales de la dopamine dans le cerveau. Par exemple, l'hypertonie que l'on constate dans la maladie de Parkinson vient d'une déplétion en dopamine, tandis que les hallucinations et les délires de la schizophrénie, de la maladie d'Alzheimer ou de la chorée de Huntington sont associés à une activité accrue de la dopamine, puisque les agents bloquants des récepteurs de la dopamine atténuent le problème.

C'est dans les laboratoires du Dr Seeman qu'on a découvert pour la première fois ce lien entre les récepteurs de la dopamine dans le cerveau et l'action des neuroleptiques, ainsi que le nombre accru de récepteurs de la dopamine au cerveau dans les cas de schizophrénie. L'équipe a maintenant cloné le gène du récepteur de la dopamine D1 et découvert et cloné les gènes de deux nouveaux récepteurs de la dopamine, D4 et D5. Les résultats de ces travaux ont récemment été publiés dans la revue scientifique britannique *Nature*. On cherche maintenant, dans ces gènes, des anomalies associées à la schizophrénie ainsi qu'aux troubles liés aux toxicomanies, car la cocaïne et l'alcool libèrent la dopamine qui, à son tour, stimule les récepteurs de la dopamine.

Les chercheurs ont trouvé des indices d'une interaction entre deux différents types de récepteurs de la dopamine dans la même cellule. Ils ont aussi découvert que cette interaction ou « lien récepteur » se produit après le décès dans le tissu cérébral humain chez des sujets neurologiquement normaux, mais non dans les tissus de patients qui meurent en état de psychose.

« Il est peut-être possible de mettre au point de nouveaux médicaments en se servant de ces nouveaux gènes clonés de récepteurs de la dopamine », déclare le Dr Seeman. Le nouveau récepteur D4, par exemple, est exceptionnellement sensible à la clozapine, qui est un neuroleptique. Selon le Dr Seeman, cela explique la faible dose qui permet à ce médicament d'arrêter les hallucinations et les délires.

La clozapine est le seul neuroleptique qui ne produit pas de dyskinésies tardives, ou mouvements anormaux de la face et du corps. Toutefois, ce médicament peut être nuisible à une certaine proportion des patients pouvant aller jusqu'à 10 pour cent, en provoquant une baisse du nombre de globules blancs. Les chercheurs de l'équipe croient que le récepteur D4 permettra de chercher des médicaments plus sûrs associés à la clozapine.

Les autres membres de l'équipe de Toronto sont les Docteurs Hyman Niznik, Hubert Van Tol, Brian O'Dowd et Susan George.

Hospital for Sick Children : recherches sur les causes et la prévention de la maladie pulmonaire néonatale

Une équipe chargée du transport des nouveau-nés arrive sur le toit de l'Hôpital pour enfants malades de Toronto avec un prématuré, après une envolée d'urgence.

La maladie pulmonaire néonatale, une affection potentiellement mortelle chez les prématurés, pourrait bien un jour être évitée si les recherches actuellement en cours à l'Hôpital pour enfants malades de Toronto sont couronnées de succès.

Une équipe de chercheurs, sous la direction du Dr Barry Smith, chef du département de médecine néonatale de cet l'hôpital, étudie le développement des poumons du fœtus ainsi que les changements que ceux-ci doivent subir, avant et pendant la naissance, pour être en mesure d'effectuer eux-mêmes les échanges gazeux jusque là réalisés par la mère et le placenta.

Selon le Dr Smith, l'adaptation des poumons du fœtus à la respiration et les changements commensurables sur les plans de la ventilation, du transport des liquides épithéliaux et de la circulation pulmonaire sont peut-être les plus critiques de toutes les transitions qui se produisent au moment de la naissance.

« Cette réalité est mise en évidence par les taux de mortalité et de morbidité néonatales qui indiquent que les problèmes respiratoires sont la principale cause de décès et de perturbations physiologiques entraînant des affections de longue durée », ajoute le Dr Smith. Le fait que ces troubles soient encore plus courants chez les prématurés montre l'importance de la croissance et de la différenciation chez le fœtus, jusqu'au succès ultime que représente l'adaptation pulmonaire périnatale.

Les chercheurs de l'équipe travaillent à l'institut de recherche de l'hôpital, ce qui fait qu'ils peuvent rapidement collaborer avec les autres scientifiques. Selon le directeur, ils espèrent mettre au point et mettre en pratique des traitements biologiques propres à remplacer les techniques de soutien cardio-respiratoire actuellement utilisées, coûteuses et parfois dangereuses. Aujourd'hui l'une des approches biologiques est le recours au surfactant, substance inexistante dans les poumons des prématurés, dans le but d'améliorer la stabilité de ces nouveau-nés. Cette substance est aussi utilisée par l'équipe de transport néonatal, pour stabiliser l'état du prématuré au cours du transfert par hélicoptère depuis l'hôpital où il était hospitalisé jusqu'à l'Hôpital pour enfants malades de Toronto.

Le Dr Smith rappelle que dans les années 50 le traitement de la poliomyélite reposait sur la technique, à savoir le poumon d'acier, mais que c'est la biologie, avec le vaccin antipoliomyélitique, qui a finalement conquis la maladie. « L'équipe de recherche espère que la même chose se produira dans le cas de la maladie pulmonaire néonatale. »

L'équipe de l'Hôpital pour enfants malades de Toronto collabore étroitement avec un autre programme financé par le CRM axé sur la biologie périnatale et mené à l'Institut de recherche Samuel Lunenfeld de l'Hôpital Mount Sinai, sous la direction du Dr Stephen Lye.

L'équipe du Dr Smith est composée des Docteurs Hugh O'Brodovich, spécialiste de la pneumologie infantile, Martin Post, spécialiste des sciences fondamentales, Ernest Cutz, pathologiste et Keith Tanswell, spécialiste de la médecine néonatale.

Une équipe de l'Université Western Ontario veut mettre au point un vaccin contre la schistosomiase

Un projet de recherche actuellement en cours à l'Université Western Ontario a pour but de mettre au point un vaccin contre la schistosomiase, maladie qui touche quelque 300 millions de personnes. Le Dr Ronald Podesta, professeur de zoologie, dirige une équipe qui tente de trouver un vaccin capable de protéger contre cette maladie, qui vient au second rang des grandes maladies parasitaires des humains, après le paludisme.

La schistosomiase est due à plusieurs espèces de douves des vaisseaux sanguins; la contamination se fait dans des eaux infectées par des larves de certains types d'escargots. Elle sévit à l'état endémique en Orient, en Afrique, à Chypre, dans certaines îles des Caraïbes, en Amérique du Sud et au Proche-Orient.

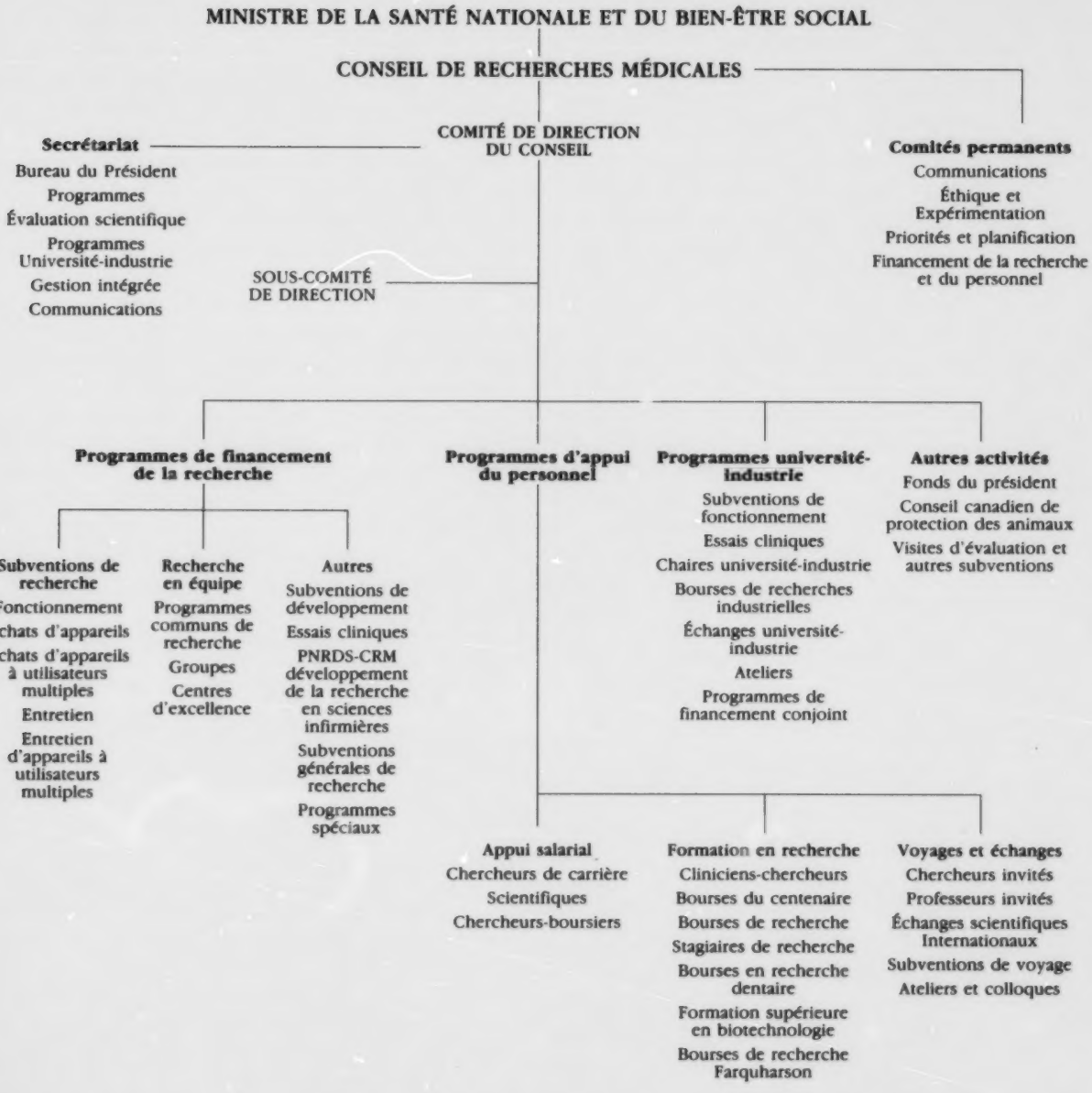
Le Dr Podesta fait remarquer que bien que d'autres facteurs puissent contribuer à la lutte contre cette maladie, la vaccination est le moyen le plus économique pour la combattre; de plus, les outils modernes qu'offre la biologie moléculaire rendent ce vaccin possible.

L'équipe a cloné deux gènes de schistosome codés pour les protéines de surface, ce qui contribue à la capacité du parasite de résister au système de défense de l'hôte. Ces gènes seront à la base de leurs études qui visent à produire un vaccin contre les schistosomes. Les protéines codées par les deux gènes auront leur expression dans des lignées de cellules de bactéries, d'insectes et de mammifères, dans le but d'obtenir suffisamment de matériel pour les études sur le vaccin et de dresser la carte des éléments des protéines qui stimulent les réponses immunitaires particulières.

On produira un vaccin synthétique et les gènes de schistosome seront incorporés dans le virus de la vaccine pour servir de véhicule au vaccin.

Les Docteurs Gill Strejan, Gregory Dekaban et Michael Clarke font aussi partie de l'équipe.

CRM — ORGANIGRAMME



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1. Rapport du président (annuel).
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4. Liste de (détenteurs de) subventions & bourses du CRM (annuelle).
5. Annuaire des boursiers du CRM (annuel).
6. Lignes directrices concernant la recherche sur des sujets humains (2^{e} édition, 1987).
7. Lignes directrices concernant la recherche sur la thérapie génique somatique chez les humains (1990)
8. Actes du Colloque international de bioéthique, Ottawa, 1987 : Pour une éthique internationale en recherche sur des sujets humains.
9. Lignes directrices de Santé et Bien-être social Canada et du Conseil de recherches médicales du Canada en matière de biosécurité en laboratoire (1990) (disponible auprès du Bureau de biosécurité, Laboratoire de lutte contre la maladie, Santé et Bien-être social Canada, Ottawa (Ontario) K1A 0L2, tél. (613) 957-1779).
10. Actualités du CRM y compris le Bulletin université-industrie (trimestrielles).
11. Cahiers de terminologie (Vocabulaires anglais-français, fr-angl; projet conjoint du CRM et du Secrétariat d'État du Canada)
    (a) Génie enzymatique (mars 1989, 753 pages) (gratuit, par l'entremise du CRM)
    (b) Génie génétique (1990, 328 pages) (25 $)
    (c) Sémiologie médicale (1990, 426 pages) (27 $)
    (d) Vocabulaire de sémiologie de l'appareil locomoteur Volume I : signes cliniques (1990, 528 pages) (29,95 $)
    (En vente au Canada par l'entremise des Librairies associées et autres libraires ou par la poste auprès du Centre d'édition du gouvernement du Canada, Approvisionnements et Services Canada, Ottawa (Canada) K1A 0S9)
12. Répertoire de recherches en santé au Canada (annuel) (distribution limitée).
13. Un défi sans précédent : à la recherche de solutions — le sida
14. Les secrets du cœur : recherche cardiovasculaire
15. Décisions

Conseil de recherches médicales
Ventilation des dépenses dans les universités par programmes du CRM en 1990–1991
(*en milliers de dollars*)

	PROGRAMMES DE FINANCEMENT DE LA RECHERCHE								PROGRAMMES UNIVERSITÉ-INDUSTRIE
	SUBVENTIONS DE RECHERCHE		RECHERCHES EN ÉQUIPE						
	Fonctionnement	Appareils	Programmes communs de recherche	Groupes du CRM	Centres d'excellence	Subventions de développement[1]	Programmes spéciaux	Subventions générales de recherche	
COLOMBIE-BRITANNIQUE									
British Columbia	10 694	195	1 656	801	9 958	260	117	80	579
Simon Fraser	52	—	—	—	—	—	—	—	—
Victoria	191	99	—	—	—	—	—	—	—
ALBERTA									
Alberta	8 254	168	1 028	2 306	—	97	12	80	345
Alberta Cancer Board	—	—	—	—	—	—	—	—	165
Calgary	6 736	53	479	—	—	14	—	50	248
Lethbridge	59	—	—	—	—	—	—	—	—
SASKATCHEWAN									
Saskatchewan	2 289	54	300	—	—	730	—	90	37
Regina	38	—	—	—	—	—	—	—	—
MANITOBA									
Manitoba	6 398	150	—	1 283	—	—	635	80	27
ONTARIO									
Carleton	191	—	—	—	—	—	—	—	—
Guelph	734	—	—	—	—	—	—	10	18
McMaster	7 138	347	591	—	—	—	29	50	708
Ottawa	4 357	80	109	—	—	288	69	50	83
Queen's	4 802	195	200	630	—	371	—	50	115
Toronto	28 080	910	2 204	2 332	—	386	—	80	857
Trent	41	—	—	—	—	—	—	—	—
Waterloo	338	—	—	—	—	—	—	—	—
Western Ontario	7 656	102	287	1 652	—	63	—	65	366
Windsor	—	—	—	—	—	—	—	—	—
York	220	—	—	—	—	—	—	—	—
QUÉBEC									
Concordia	297	—	—	—	—	—	—	—	53
Laval	4 612	349	66	1 246	—	386	56	80	142
McGill	19 933	1 236	938	1 300	9 917	50	617	65	509
Montréal	11 228	893	2 903	1 701	—	606	19	90	1 097
U. du Québec	423	111	294	—	—	—	102	—	—
Sherbrooke	3 267	442	—	807	—	201	—	50	122
NOUVEAU-BRUNSWICK									
New Brunswick	66	—	—	—	—	—	—	—	—
ÎLE-DU-PRINCE-ÉDOUARD									
Prince Edward Island	102	—	—	—	—	—	—	10	—
NOUVELLE-ÉCOSSE									
Dalhousie	4 057	69	786	—	—	407	—	80	190
NEWFOUNDLAND									
Memorial	1 834	23	—	—	—	293	—	65	3
AUTRES	—	—	—	—	—	—	—	—	—
À L'ÉTRANGER	—	—	—	—	—	—	—	—	82
TOTAL GLOBAL	**134 087**	**5 476**	**11 841**	**14 058**	**19 875**	**4 152**	**1 656**	**1 125**	**5 746**

[1] Comprend les subventions de développement de la recherche en sciences infirmières (180 $)
[2] Comprend les bourses en recherche dentaire (252 $); les bourses du centenaire (1 162 $)

PROGRAMMES D'APPUI DU PERSONNEL										
APPUI SALARIAL			FORMATION EN RECHERCHE							
Chercheurs de carrière	Scientifiques du CRM	Chercheurs-boursiers	Cliniciens-chercheurs	Boursiers de recherche[2]	Stagiaires de recherche	Formation en biotechnologie	Bourses de recherche Farquharson	VOYAGES ET ÉCHANGES[3]	AUTRES ACTIVITÉS[4]	TOTAL
346	234	796	—	819	759	30	109	49	13	27 495
—	—	—	—	—	72	—	—	—	—	124
—	—	—	—	52	15	—	—	—	—	357
227	67	287	55	229	189	—	64	30	7	13 445
—	—	—	—	—	—	—	—	—	—	165
—	362	569	—	401	109	76	10	11	—	9 118
—	—	—	—	—	—	—	—	—	—	59
—	106	—	—	162	56	—	43	20	10	3 897
—	—	—	—	—	6	—	—	—	—	44
165	75	668	41	516	210	—	64	59	12	10 383
—	—	—	—	—	—	—	—	—	—	191
—	—	—	—	306	9	—	—	—	—	1 077
84	127	195	45	214	197	—	46	8	—	9 779
161	—	105	—	373	255	—	29	5	14	5 978
92	—	179	—	107	343	22	29	2	12	7 149
342	444	1 061	160	2 386	871	—	197	36	6	40 352
—	—	—	—	—	—	—	—	—	—	41
—	—	—	—	—	39	—	—	8	—	385
346	124	340	—	222	440	—	61	22	8	11 754
—	—	—	—	—	1	—	—	—	—	1
—	—	—	—	21	60	—	—	—	—	301
—	—	—	—	11	33	—	—	—	—	394
84	65	173	—	124	312	—	57	—	—	7 752
870	519	1 428	80	1 158	723	—	107	60	20	39 530
253	380	493	45	436	696	—	108	51	31	21 030
—	—	54	—	52	45	—	—	10	—	1 091
83	68	96	—	123	45	—	21	16	5	5 346
—	—	—	—	—	3	—	—	—	—	69
—	—	—	—	—	—	—	—	—	—	112
126	—	201	—	111	102	—	50	59	10	6 248
—	—	153	—	33	18	—	21	5	—	2 448
—	—	—	—	—	—	—	6	193	1 238	1 437
—	—	—	256	6 820	221	—	—	—	490	7 869
3 179	**2 571**	**6 798**	**682**	**14 676**	**5 829**	**128**	**1 022**	**644**	**1 876**	**235 421**

[3] Comprend les chercheurs invités (404 $); les professeurs invités (19 $); les subventions de voyage (28 $); les ateliers et colloques (193 $)
[4] Comprend le Fonds du Président (169 $); les visites d'évaluation et autres subventions (1 207 $); le Conseil canadien de protection des animaux (500 $)

Conseil de recherches médicales
Nombre de subventions et bourses
1989–1990 et 1990–1991

Programmes	1989–1990		1990–1991				
	Subventions et bourses		Nombre de subventions et bourses			Totaux	
	Nombre	Montant (000) $	en cours	renouvellements	nouvelles	Nombre	Montant (000) $
FINANCEMENT DE LA RECHERCHE							
SUBVENTIONS DE RECHERCHE							
Fonctionnement	2 093	128 144	1 209	651	257	2 117	134 087
Achats d'appareils	19	1 118	1	—	93	94	5 476
RECHERCHE EN ÉQUIPE							
Programmes communs de recherche	33	10 693	25	6	9	40	11 841
Groupes du CRM	11	14 054	9	2	2	13	14 058
Centres d'excellence	2	400	—	—	5	5	19 875
Subventions de développement	81	4 115	65	—	12	77	4 152
Programmes spéciaux	12	874	4	3	7	14	1 656
Subventions générales de recherche	39	1 125	—	—	39	39	1 125
	2 290	**160 523**	**1 313**	**662**	**424**	**2 399**	**192 270**
PROGRAMMES UNIVERSITÉ-INDUSTRIE							
Recherches en équipe	—	4 021	52	3	24	79	4 824
Bourses	—	442	20	2	109	131	922
	85	**4 463**	**72**	**5**	**133**	**210**	**5 746**
PROGRAMMES D'APPUI DU PERSONNEL							
APPUI SALARIAL							
Chercheurs de carrière	43	3 153	37	4	—	41	3 179
Scientifiques du CRM	50	2 382	41	—	7	48	2 571
Chercheurs-boursiers	131	5 515	95	—	38	133	6 798
FORMATION EN RECHERCHE							
Cliniciens-chercheurs	8	251	8	—	9	17	682
Bourses du Centenaire	35	1 154	22	—	9	31	1 162
Bourses de recherche	453	11 294	218	94	172	484	13 262
Bourse de stagiaires de recherche	484	5 124	163	197	168	528	5 829
Bourses en recherche dentaire	7	241	4	2	2	8	252
Formation et recyclage en biotechnologie	27	285	11	2	—	13	128
Bourses de recherche Farquharson	284	1 002	—	—	279	279	1 022
VOYAGES ET ÉCHANGES							
Chercheurs invités	38	292	4	—	32	36	404
Professeurs invités	24	28	—	—	20	20	19
Subventions de voyages, ateliers et colloques	38	284	—	—	42	42	221
	1 622	**31 005**	**603**	**299**	**778**	**1 680**	**35 529**
AUTRES ACTIVITÉS							
Fonds du Président	39	213	—	—	34	34	169
Conseil canadien de protection des animaux	1	469	1	—	—	1	500
Visites d'évaluation et autres subventions	48	666	7	—	50	57	1 207
	88	**1 348**	**6**	**0**	**86**	**92**	**1 876**
TOTAL GLOBAL	**4 085**	**197 339**	**1 994**	**966**	**1 421**	**4 381**	**235 421**

Conseil de recherches médicales
Dépenses du CRM par programme, de 1988–1989 à 1990–1991
et ventilation par catégorie d'appui en 1990–1991
(*en milliers de dollars*)

	DÉPENSES			VENTILATION PAR CATÉGORIE D'APPUI EN 1990–1991				
	1988–1989	1989–1990	1990–1991	Fonctionnement	Appareils	Avantages sociaux et traitements	Allocations de recherche	Indemnités de voyages et autres
FINANCEMENT DE LA RECHERCHE								
SUBVENTIONS DE RECHERCHE								
Fonctionnement	119 515	128 144	134 087	130 703	3 384	—	—	—
Achats d'appareils	2 504	1 118	5 476	—	5 476	—	—	—
RECHERCHES EN ÉQUIPE								
Programmes communs de recherche	10 285	10 693	11 841	11 831	10	—	—	—
Groupes du CRM	11 817	14 054	14 058	10 821	762	2 475	—	—
Centres d'excellence	—	400	19 875	19 875	—	—	—	—
Subventions de développement	4 699	4 115	4 152	642	271	3 191	48	—
Programmes spéciaux	1 103	874	1 656	1 549	—	—	—	107
Subventions générales de recherche	1 125	1 125	1 125	1 125	—	—	—	—
	151 048	**160 523**	**192 270**	**176 546**	**9 903**	**5 666**	**48**	**107**
PROGRAMMES UNIVERSITÉ-INDUSTRIE								
Recherches en équipe	2 412	4 021	4 824	4 442	382	—	—	—
Bourses	158	442	922	—	—	904	10	8
	2 570	**4 463**	**5 746**	**4 442**	**382**	**904**	**10**	**8**
PROGRAMMES D'APPUI DU PERSONNEL								
APPUI SALARIAL								
Chercheurs de carrière	3 243	3 153	3 179	—	—	3 179	—	—
Scientifiques du CRM	2 354	2 382	2 571	—	—	2 571	—	—
Chercheurs-boursiers	5 075	5 515	6 798	—	—	6 258	540	—
FORMATION EN RECHERCHE								
Cliniciens-chercheurs	—	251	682	—	—	622	57	3
Bourses du Centenaire	961	1 154	1 162	—	—	1 062	94	6
Bourses de recherche	10 867	11 294	13 262	—	—	12 635	540	87
Stagiaires de recherche	4 584	5 124	5 829	—	—	5 665	160	4
Bourses en recherche dentaire	230	241	252	—	—	244	7	1
Formation et recyclage en biotechnologie	555	285	128	—	—	116	12	—
Bourses de recherche Farquharson	946	1 002	1 022	—	—	1 022	—	—
VOYAGES ET ÉCHANGES								
Chercheurs invités	264	292	404	—	—	—	34	370
Professeurs invités	13	28	19	—	—	—	—	19
Subventions de voyage, ateliers et colloques	241	284	221	—	—	—	—	221
	29 333	**31 005**	**35 529**	**—**	**—**	**33 374**	**1 444**	**711**
AUTRES ACTIVITÉS								
Fonds du Président	184	213	169	—	—	—	—	169
Conseil canadien de protection des animaux	427	469	500	—	—	—	—	500
Visites d'évaluation et autres subventions	298	666	1 207	—	—	—	—	1 207
	909	**1 348**	**1 876**	**—**	**—**	**—**	**—**	**1 876**
TOTAL DE TOUS LES PROGRAMMES	**183 860**	**197 339**	**235 421**	**180 988**	**10 285**	**39 944**	**1 502**	**2 702**
POURCENTAGE DU TOTAL DE 1990–1991				**76,9 %**	**4,4 %**	**17,0 %**	**0,6 %**	**1,1 %**

Conseil de recherches médicales
Ventilation des dépenses du CRM par province
1987–1988 à 1990–1991

	1987–1988		1988–1989		1989–1990		1990–1991	
PROVINCE	(000) $	%	(000) $	%	(000) $	%	(000) $	%
Colombie-Britannique	13 890	8,1	14 797	8,0	16 802	8,5	27 976	11,9
Alberta	13 952	8,2	16 202	8,8	20 657	10,5	22 787	9,7
Saskatchewan	3 970	2,3	4 293	2,3	3 795	1,9	3 941	1,7
Manitoba	8 783	5,2	9 302	5,1	9 568	4,9	10 383	4,4
Ontario	63 379	37,2	66 852	36,4	71 616	36,3	77 008	32,7
Québec	51 583	30,3	56 739	30,9	58 417	29,6	75 243	31,9
Nouveau-Brunswick	14	<0,1	107	<0,1	90	<0,1	69	<0,1
Île-du-Prince-Édouard	54	<0,1	10	<0,1	100	<0,1	112	<0,1
Nouvelle-Écosse	5 680	3,3	6 027	3,3	6 075	3,1	6 248	2,7
Terre-Neuve	1 899	1,1	1 863	1,0	2 295	1,2	2 448	1,0
Autres	1 035	0,6	1 114	0,6	1 528	0,8	1 437	0,6
À l'étranger	6 248	3,7	6 554	3,6	6 396	3,2	7 869	3,3
TOTAL	170 467	100,0	183 860	100,0	197 339	100,0	235 421	100,0

Subventions de fonctionnement par domaine de recherche

Classification	NOMBRE DE SUBVENTIONS			Montant (000) $	Pourcentage du total
	Subventions de recherche	Programmes communs de recherche	Groupes du CRM		
Bactériologie	62	2	—	4 736	2,9
Biochimie et biologie moléculaire	232	3	2	22 580	14,1
Sang	57	—	—	4 316	2,7
Cancer	96	1	—	6 927	4,3
Appareil cardiovasculaire	144	3	1	11 363	7,1
Biologie cellulaire	77	—	—	6 116	3,8
Sciences dentaires	28	2	1	4 216	2,6
Recherche sur les médicaments	78	2	—	5 476	3,4
Endocrinologie	83	2	1	7 402	4,6
Appareil digestif — foie	75	2	1	7 111	4,4
Génétique	57	—	1	5 611	3,5
Ouïe	8	—	—	352	0,2
Imagerie et médecine nucléaire	25	—	1	2 932	1,8
Immunologie et transplantation	94	2	1	8 099	5,0
Métabolisme — diabète	88	—	—	6 617	4,1
Appareil locomoteur	64	2	—	4 232	2,6
Néphrologie	38	—	1	3 642	2,3
Sciences neurologiques	322	9	5	26 466	16,5
Nutrition	22	—	—	1 388	0,9
Reproduction — grossesse	68	2	1	7 752	4,8
Respiration	89	1	—	6 071	3,8
Virologie	64	—	—	4 711	2,9
Vision	48	1	—	2 515	1,6
Non classifié	2	—	—	44	0,0
TOTAL	1 918	34	14	160 675	100,0

Calculs du 13 juin 1991

RAPPORT DU VÉRIFICATEUR

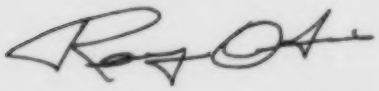
Au Conseil de recherches médicales
et au ministre de la Santé nationale et du Bien-être social

J'ai vérifié l'état des résultats du Conseil de recherches médicales de l'exercice terminé le 31 mars 1991. La responsabilité de cet état financier incombe à la direction du Conseil. Ma responsabilité consiste à exprimer une opinion sur cet état financier en me fondant sur les résultats de ma vérification.

Ma vérification a été effectuée conformément aux normes de vérification généralement reconnues. Ces normes exigent que la vérification soit planifiée et exécutée de manière à fournir un degré raisonnable de certitude quant à l'absence d'inexactitudes importantes dans l'état financier. La vérification comprend le contrôle par sondage des informations probantes à l'appui des montants et des autres éléments d'information fournis dans l'état financier. Elle comprend également l'évaluation des principes comptables suivis et des estimations importantes faites par la direction, ainsi qu'une appréciation de la présentation d'ensemble de l'état financier.

À mon avis, cet état financier présente fidèlement les résultats de l'exploitation du Conseil pour l'exercice terminé le 31 mars 1991 selon les conventions comptables énoncées dans la note 2 afférente à l'état financier, appliquées de la même manière qu'au cours de l'exercice précédent.

Pour le vérificateur général du Canada,



Raymond Dubois, F.C.A.
sous-vérificateur général

Ottawa, Canada
le 14 juin 1991

Conseil de recherches médicales
État de l'exploitation pour l'exercice terminé le 31 mars 1991
(en milliers de dollars)

	1991	1990
DÉPENSES		
Subventions et bourses (tableau)		
Programmes de financement de recherche	192 270	160 523
Programmes d'appui du personnel	35 529	31 005
Programmes université-industrie	5 746	4 463
Autres activités	1 876	1 348
	235 421	197 339
Exploitation		
Traitement et indemnités aux employés	2 752	2 009
Indemnités de cessation d'emploi	8	—
Voyages (note 6)	1 055	807
Services professionnels et spéciaux	449	362
Publications	275	320
Logement	205	243
Communications	189	180
Fournitures et approvisionnements	146	102
Mobilier et matériel	126	64
Réparation et entretien du matériel	87	66
	5 292	4 153
Administration		
Traitement et indemnités aux employés	1 044	908
Indemnités de cessation d'emploi	1	—
Services professionnels et spéciaux	131	90
Logement	92	54
Communications	72	81
Publications	66	31
Fournitures et approvisionnements	55	46
Mobilier et matériel	48	29
Réparation et entretien du matériel	33	30
Voyages (note 6)	25	34
	1 567	1 303
	242 280	202 795
RECETTES NON FISCALES		
Recouvrements de dépenses d'exercices précédents	147	279
COÛT NET DE L'EXPLOITATION (NOTE 3)	242 133	202 516

Les notes et le tableau complémentaires font partie intégrante de cet état.

Approuvé par le Conseil :
Le Vice-président

David Hawkins

D. Hawkins

Approuvé par la Gestion :
Le Directeur de la Gestion intégrée

A. Belliveau

Conseil de recherches médicales
Notes afférentes à l'état de l'exploitation
31 mars 1991

1. **Pouvoir et objectif**

Le Conseil de recherches médicales a été constitué en 1969 en vertu de la Loi sur le Conseil de recherches médicales. Le Conseil est un établissement public nommé à l'annexe II de la Loi sur la gestion des finances publiques. Il a pour objectif d'aider à atteindre, dans les sciences de la santé, la qualité et le niveau de recherche essentiels au maintien et au perfectionnement des services de santé. Les dépenses de fonctionnement et de subventions du Conseil sont financées par le biais d'une autorisation budgétaire annuelle. Les indemnités aux employés sont autorisées par le biais d'une autorisation statutaire.

2. **Conventions comptables importantes**

L'état de l'exploitation a été dressé conformément aux conventions comptables suivantes :

(a) Comptabilisation des dépenses

Les subventions et les bourses sont imputées aux dépenses lorsqu'elles sont versées. À l'exception des indemnités de cessation d'emploi et de vacances qui sont comptabilisées selon la méthode de la comptabilité de caisse, toute dépense de fonctionnement est comptabilisée selon la méthode de la comptabilité d'exercice. Cette pratique est conforme à la convention comptable du gouvernement.

(b) Achats d'immobilisations

Les acquisitions d'immobilisations sont imputées aux dépenses de fonctionnement au cours de l'exercice de leur achat.

(c) Services fournis gratuitement par les ministères

Les montants estimatifs de services fournis gratuitement par les ministères sont compris dans les dépenses.

(d) Recouvrement de dépenses d'exercices précédents

Les recouvrements de dépenses d'exercices précédents sont comptabilisés au titre des recettes dès leur réception et ne sont pas déduits des dépenses.

(e) Cotisations au Régime de pension de retraite de la Fonction publique

Les employés participent au Régime de pension de retraite de la Fonction publique administré par le gouvernement du Canada. Les employés et le Conseil contribuent également au coût du régime. Les cotisations du Conseil sont imputées aux dépenses sur une base courante.

3. Crédits parlementaires
(en milliers de dollars)

	1991	1990
Ministère de la Santé nationale et du Bien-être social		
Crédit 35 — Subventions	235 421	197 346
annulé	—	7
	235 421	197 339
Crédit 30 — Dépenses de fonctionnement	6 037	4 726
annulé	63	11
	5 974	4 715
Statutaire — Contributions aux régimes d'indemnités des employés	467	370
Total des crédits utilisés	241 862	202 424
Plus : services fournis gratuitement par autres ministères	418	371
Moins : recettes non fiscales	147	279
Coût net de l'exploitation	242 133	202 516

4. Fonds en fiducie

À l'article 4(3) de la Loi sur le Conseil de recherches médicales, il est prévu que le Conseil administre certains fonds en fiducie séparément de ses activités financées par des crédits parlementaires. Le but et le compte rendu comptable de ces fonds sont présentés ci-dessous. Le solde de ces fonds est déposé auprès du Receveur général du Canada.

(a) En 1974, le Conseil a reçu $75,000 d'un donateur anonyme pour la création d'un fonds. L'intérêt reçu doit être utilisé pour verser des subventions pour la recherche dans les secteurs de la dyskinésie et du torticolis. D'autres dons reçus au cours des exercices précédents non destinés à des projets particuliers ont aussi été portés au crédit de ce fonds.

(b) En 1985, le Conseil a reçu un prix de distinction intitulé « The St. Boniface General Hospital Research Foundation Award » qui comprenait un montant de $20,000. En reconnaissance de l'importance du prix, le Conseil, en accord avec la Fondation, a décidé d'utiliser la partie monétaire du prix pour établir un fonds en fiducie qui pourrait servir à financer des bourses d'été en recherche visant à encourager les étudiants diplômés de l'école secondaire, les étudiants de première année en pré-médecine et les étudiants en médecine de première et deuxième année à s'engager dans la recherche biomédicale. Ces bourses sont appelées « bourses de recherche Farquharson ». Le paiement de la dernière bourse a été effectué en 1991 et le fonds est maintenant fermé.

(c) Dans le cadre de la nouvelle politique des subventions de contrepartie, le gouvernement fédéral annonçait, en février 1986, qu'une entreprise du secteur privé qui veut accorder des fonds à la recherche médicale peut verser ses contributions soit aux universités soit au Conseil de recherches médicales. Lorsque le Conseil reçoit cet argent, il doit être déposé dans un compte de fiducie et les versements effectués conformément aux accords entre le donateur et le Conseil.

Voici les transactions se rapportant à ces trois comptes de fiducie :

	Dyskinésie et torticolis		Bourses de recherche Farquharson		Dons pour la recherche	
	1991	1990	1991	1990	1991	1990
Solde en début d'exercice	$ 92 353	$ 83 056	$ 66	$ 5 479	$ 635 046	$ 521 157
Plus :						
— dons reçus	—	—	—	—	1 436 843	988 990
— intérêt reçu	10 543	9 297	—	67	88 339	43 132
Moins :						
— Subventions versées	—	—	66	5 480	1 347 782	718 233
Solde en fin d'exercice	102 896	92 353	—	66	812 446	635 046

5. Engagements

Le Conseil s'est engagé à verser des bourses et des subventions au cours des prochains exercices, sous réserve de l'affectation de fonds par le Parlement. Les engagements des exercices à venir s'établissent comme suit :

Exercice de versement	1991	1990
	(en milliers de dollars)	
1990–1991	—	198 130
1991–1992	238 895	143 635
1992–1993	170 881	89 443
1993–1994	105 659	43 264
1994–1995	46 387	19 928
1995–1996	19 139	6 356
1996–1997	6 315	—
	587 276	500 756

6. Voyages

Les dépenses de voyage imputées à l'exploitation sont liées au processus d'évaluation par des pairs et ont été engagées par les membres des 26 comités de subventions, des 10 comités de bourses et par le personnel du Conseil, dans le but de se réunir pour examiner et évaluer les demandes de subventions et de bourses. En outre, les dépenses de voyage engagées par le Conseil, son comité exécutif et ses comités permanents et les autres membres du personnel consultatif qui ne sont pas des fonctionnaires sont également imputées à l'exploitation.

Les dépenses de voyage imputées à l'administration ont été engagées à l'égard du soutien général des activités administratives du Conseil, ce qui comprend les réunions des groupes consultatifs spéciaux établis pour étudier des questions particulières au nom du Conseil. En voici le détail :

	1991	1990
	(en milliers de dollars)	
Exploitation :		
Comités de subventions	563	460
Comités de bourses	132	103
Conseil et Comité de direction	69	64
Comités permanents	38	52
Non-fonctionnaires	95	31
Fonctionnaires	158	97
	1 055	807
Administration :		
Groupes consultatifs	7	15
Fonctionnaires	18	19
	25	34

Tous les membres du Conseil et des comités susmentionnés ne touchent aucune rémunération. Le Conseil leur rembourse uniquement leurs frais de déplacement.

Conseil de recherches médicales
Tableau des subventions et bourses pour l'exercice terminé le 31 mars 1991
(*en milliers de dollars*)

	1991	1990
PROGRAMMES DE FINANCEMENT DE RECHERCHE		
Subventions de recherches		
Fonctionnement	134 087	128 144
Achat d'appareils	5 476	1 118
Recherche en équipe		
Programme commun de recherche	11 841	10 693
Groupes du CRM	14 058	14 054
Centres d'excellence	19 875	400
Subventions de développement	4 152	4 115
Programmes spéciaux	1 656	874
Subventions générales de recherche	1 125	1 125
	192 270	160 523
PROGRAMMES D'APPUI DU PERSONNEL		
Programmes d'appui salarial		
Chercheurs de carrière	3 179	3 153
Chercheurs-boursiers	6 798	5 515
Scientifiques du CRM	2 571	2 382
Programmes de formation en recherche		
Cliniciens-chercheurs	682	251
Bourses du Centenaire	1 162	1 154
Bourses de recherche	13 262	11 294
Bourses en recherche dentaire	252	241
Bourses de stagiaires de recherche	5 829	5 124
Formation supérieure en biotechnologie	128	285
Bourses de recherche Farquharson	1 022	1 002
Voyages et échanges		
Scientifiques invités	404	292
Professeurs invités	19	28
Subventions de voyage	28	19
Ateliers et colloques	193	265
	35 529	31 005
PROGRAMMES UNIVERSITÉ-INDUSTRIE		
Recherche en équipe	4 824	4 021
Bourses	922	442
	5 746	4 463
AUTRES ACTIVITÉS		
Fonds du Président	169	213
Conseil canadien de protection des animaux	500	469
Visites sur place et autres subventions	1 207	666
	1 876	1 348
	235 421	197 339

COMITÉS D'EXAMEN PAR LES PAIRS

Le Conseil a approuvé la nomination des personnes suivantes comme membres des comités d'examen par les pairs pour 1990–1991. Il est fait seulement mention du diplôme professionnel et/ou du PhD ou de l'équivalent; le nom est suivi par l'affiliation universitaire.

	NEUROSCIENCES B SCIENCES NEUROLOGIQUES B		PATHOLOGY & MORPHOLOGY PATHOLOGIE & MORPHOLOGIE		PHARMACEUTICAL SCIENCES SCIENCES PHARMACEUTIQUES	
Chairperson Président	Richard A. Murphy PhD	Alberta	Avrum I. Gotlieb MD	Toronto	Patrick P. du Souich MD PhD	Montréal
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Members Membres	Garth M. Bray MD	McGill	Moïse Bendayan PhD	Montréal	Normand Beaulieu PhD	H & W Canada (Ottawa)
	Dominique Durand PhD	Case Western Reserve (Cleveland)	Yves Clermont PhD	McGill		
			John G. Gartner MD	Manitoba	Pierre-M. Bélanger PhD	Laval
	Andrew S. French PhD	Alberta	Robert A. Goyer MD	Western Ontario	Tarunendu Ghose MB PhD	Dalhousie
	David A. Hopkins PhD	Dalhousie	Anthony Hayes BVSc PhD	Guelph	Vincent Lenaerts PhD	Montréal
	John F. Kalaska PhD	Montréal	Annelise O. Jorgensen PhD	Toronto	Christopher W. Loomis PhD	Memorial
	Brian A. MacVicar PhD	Calgary	Kalman T. Kovacs MD PhD	Toronto	Gordon McKay PhD	Saskatchewan
	Mary E. Morris PhD	Ottawa	Geoffrey Rowden PhD	Dalhousie	Franco M. Pasutto PhD	Alberta
	Richard J. Riopelle MD	Queen's	Esmond J. Sanders PhD	Alberta	Jack P. Uetrecht MD PhD	Toronto
	John C. Roder PhD	Toronto	William A. Staines PhD	Ottawa		
	R. Jane Rylett PhD	Western Ontario				
	Jacques P. Tremblay PhD	Laval				

	MRC GROUPS GROUPES DU CRM		PHARMACOLOGY & TOXICOLOGY PHARMACOLOGIE & TOXICOLOGIE		RESPIRATORY SYSTEM SYSTÈME RESPIRATOIRE	
Chairperson Président	David Hawkins MD	Memorial	Frank S. LaBella PhD	Manitoba	A. Keith Tanswell MB	Toronto
Scientific Officer Adjoint scientifique	James Wood MD	Saskatchewan	Kenneth W. Renton PhD	Dalhousie	Donald B. Jennings MD PhD	Queen's
Members Membres	H. Christian Fibiger PhD	British Columbia	John R. Bend BScPharm PhD	Western Ontario	Irma Bernatchez-Lemaire PhD	Ottawa
	Henry G. Friesen MD	Manitoba	André Castonguay PhD	Laval	Louis-Philippe Boulet MD	Laval
	Mitio Inokuti PhD	Argonne National Lab. Ill. USA	Marielle Gascon-Barré PhD	Montréal	Michel A. Bureau MD	Sherbrooke
			Pavel D. Hrdina MD PhD	Ottawa	S.F. Paul Man MD	Alberta
	Gordon J. Mogenson PhD	Western Ontario	Khem H. Jhamandas PhD	Queen's	James G. Martin MD	McGill
	John Remmers MD	Calgary	Pierre Larochelle MD PhD	Montréal	Hugh M. O'Brodovich MD	Toronto
	Marek Rola-Pleszczynski MD	Sherbrooke	Stanley Nattel MD	McGill	Paul M. O'Byrne MB	McMaster
	Michael Smith PhD	Vancouver	Allan B. Okey PhD	Toronto	Peter D. Paré MD	British Columbia
	Kenneth P. Strickland PhD	Western Ontario	Sheldon H. Roth BScPhm PhD	Calgary	John E. Remmers MD	Calgary
	Cecil C. Yip PhD	Toronto	Pierre Sirois PhD	Sherbrooke	Newman L. Stephens MD	Manitoba
			Bruce Virgo PhD	Memorial		

	DEVELOPMENT OF RESEARCH IN NURSING* DÉVELOPPEMENT DE LA RECHERCHE EN SCIENCES INFIRMIÈRES**		PROGRAM GRANTS PROGRAMMES COMMUNS DE RECHERCHE		MAINTENANCE & MULTI-USER EQUIPMENT ACHAT ET ENTRETIEN D'APPAREILS À USAGES MULTIPLES	
Chairperson Président	Fernand Turcotte MD	Laval	Karl Lederis PhD	Calgary	Cyril M. Kay PhD	Alberta
Assoc. Chairperson Vice-Président					Albert F. Clark PhD	Queen's
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	Gerry Devins PhD	Calgary	Lorne A. Babiuk PhD	Saskatchewan	Joseph A.M. Hinke MD	Ottawa
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	Mary-Ellen Jeans BN PhD	McGill	Jack Diamond PhD	McMaster	Chester J. Michalski PhD	Memorial
	Sylvie Jutras PhD	Montréal	Eugene Downar MB	Toronto	Mark J. Poznansky PhD	Alberta
	Dorothy M. Pringle BScN PhD	Toronto	Mohamed A. Karmali MB	Toronto	Bitten Stripp PhD	McGill
	Robert S. Tonks BPharm PhD	Dalhousie	Thomas G. Kennedy PhD	Western Ontario	John C. Szerb MD	Dalhousie
			George J. Klein MD	Western Ontario	Johan E. van Lier PhD	Queen's
			James P. Lund PhD	Montréal		
			Erroll B. Marliss MD	McGill		
			Gilbert A. Schultz PhD	Calgary		
			Hendrik W. Wevers P. Eng.	Queen's		
			Don Wigle PhD	H & W Canada Ott.		

*NHRDP-MRC Joint Committee
**Comité conjoint PNRDS-CRM

	UNIVERSITY-INDUSTRY PROGRAM PROGRAMME UNIVERSITÉ-INDUSTRIE		CAREER INVESTIGATORS CHERCHEURS DE CARRIÈRE		CENTENNIAL FELLOWSHIPS BOURSES DU CENTENAIRE	
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	Cecil Pickett PhD	Merck Frosst Canada	Bruce R. Schnell PhD	Saskatchewan	Connie J. Eaves PhD	British Columbia
	William J. Racz PhD	Queen's	Mladen Vranic MD DSc	Toronto	Gérard M. Guiraudon MD	Western Ontario
	Fernand Roberge PhD	Montréal			Rose M. Johnstone PhD	McGill
	Ernest Seidman MD	Montréal			Alexander Marks MD PhD	Toronto
	Donald P. Zarowny MD	Upjohn of Canada			Alec Sehon PhD	Manitoba

	CLINICIAN-SCIENTISTS CLINICIENS-CHERCHEURS		FELLOWSHIPS A (HEALTH PROFESSIONALS) BOURSES DE RECHERCHE A (Diplômés professionnels)		FELLOWSHIPS B (PhD) BOURSES DE RECHERCHE B (PhD)	
Chairperson Président	Phil Gold MD PhD	McGill	Peter B. Innes DDS	Saskatchewan	Frances J.R. Richmond PhD	Queen's
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	Bernard Langer MD	Toronto	John Kc on MD	McMaster	William H. Moger PhD	Dalhousie
	Mamoru Watanabe MD PhD	Calgary	Ping Lee PhD	Toronto	Catherine Pang PhD	British Columbia
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			Steven P. Nadler MD	Ottawa		
			Irma Parhad MD	Calgary	Béla P. Ruzsicska PhD	Sherbrooke
					Allan M. Smith PhD	Montréal
					Brian J. Underdown PhD	McMaster

	SCHOLARSHIPS A (HEALTH PROFESSIONALS) CHERCHEURS-BOURSIERS A (Diplômés professionnels)		SCHOLARSHIPS B (PhD) CHERCHEURS-BOURSIERS B (PhD)		SCIENTISTS SCIENTIFIQUES	
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	G. Rex Holland PhD	Alberta	Harold W. Cook PhD	Dalhousie	Gordon H. Dixon PhD	Calgary
	André R. Lecours MD	Montréal	Louis T.J. Delbaere PhD	Saskatchewan	Carl A. Goresky MD PhD	McGill
	Barry I. Posner MD	McGill	Trevor Drew PhD	Montréal	Leif Hertz MD DSc	Saskatchewan
	Meng H. Tan MD	Dalhousie	Allen E.C. Eaves MD PhD	British Columbia	Kevin M.W. Keough PhD	Memorial
	John V. Tyberg MD PhD	Calgary	Emanuel Escher PhD	Sherbrooke	Fernand Labrie MD PhD	Laval
	Jerry J. Warsh MD PhD	Toronto	Peter Faulkner PhD	Queen's	James Neufeld PhD	Western Ontario
			Yvonne A. Lefebvre PhD	Ottawa	Donald W. Paty MD	British Columbia
			Victor Ling PhD	Toronto	Harald Sonnenberg PhD	Toronto
			Neil B. Madsen PhD	Alberta		
			François Marceau MD PhD	Laval		
			Ian R. Senciall PhD	Memorial		
			Hershey L. Warshawsky PhD	McGill		
			Sandra F. Witelson PhD	McMaster		

	STUDENTSHIPS A BOURSES DE STAGIAIRE DE RECHERCHE A		STUDENTSHIPS B BOURSES DE STAGIAIRE DE RECHERCHE B		STUDENTSHIPS C BOURSES DE STAGIAIRE DE RECHERCHE C	
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	Mark D. Evered PhD	Saskatchewan	W. McIntyre Burnham PhD	Toronto	M. Mary Konstantareas PhD	Guelph
	Emmanuel A. Faust PhD	Dalhousie	Douglas J. Franks PhD	Ottawa	Joseph Pear PhD	Manitoba
	Thomas G. Flynn PhD	Dalhousie	Gaëtan Guillemette PhD	Sherbrooke	Maurice Ptito PhD	Montréal
	Anne Foerster PhD	McMaster	Madan G. Joneja PhD	Queen's	Brian Timney PhD	Western Ontario
	Ronald J. Hancock PhD	Laval	Marc Lavoie PhD	Laval	Fran Wilkinson PhD	McGill
	Steven D. Pelech PhD	British Columbia	Marie Sarfati MD PhD	Montréal		
	Benjamin K.-Y. Tsang PhD	Ottawa	Verna M. Skanes PhD	Memorial		

LIST OF MRC GRANTS AND AWARDS 1990-91

FOREWORD

This publication has been prepared as a companion document to the Report of the President for 1990-91. It contains the list of all grants and awards made by MRC in the year ending March 31, 1991.

Further details on the programs offered by the Council may be obtained by consulting the following publications: Report of the President, Grants and Awards Guide, University-Industry Grants and Awards Guide, the MRC Newsletter and Decisions, and the University-Industry Bulletin.

For further information on the activities of MRC, or additional copies of this publication, please contact:

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LISTE DES SUBVENTIONS ET BOURSES DU CRM 1990-1991

AVANT-PROPOS

Cette publication est un complément du Rapport du Président du Conseil de recherches médicales du Canada (1990-1991). Elle contient toutes les subventions et bourses accordées par le CRM pour l'année se terminant le 31 mars 1991.

On peut trouver des descriptions plus détaillées des programmes offerts par le Conseil en consultant les publications suivantes: le Rapport du Président, le Guide de subventions et bourses, le Guide de subventions et bourses université-industrie, les revues Actualités du CRM, Décisions et le Bulletin université-industrie.

Pour plus de renseignements sur le CRM ou pour des copies de cette publication, communiquez avec:

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Conseil de recherches médicales du Canada
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Pré-Tunney
Ottawa, Canada K1A 0W9

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TABLE OF CONTENTS/TABLE DES MATIÈRES

PROGRAM/PROGRAMME	PAGE
Medical Research Council of Canada/Conseil de recherches médicales du Canada	
Operating Grants/Subventions de fonctionnement	1
Equipment Grants/Subventions d'achat d'appareils	117
Maintenance Grants/Subventions d'entretien	122
Development Grants/Subventions de développement	129
Subject Research Development Grants/Subventions de développement thématique	133
Biotechnology Development Grants/Subventions de développement des biotechnologies	133
NHRDP-MRC Joint Program for Development of Research in Nursing/ Programme conjoint PNRDS-CRM pour le développement de la recherche en sciences infirmières	134
MRC Groups/Groupes du CRM	134
Program Grants/Subventions de programme commun de recherche	136
Networks of Centres of Excellence/Réseaux de centres d'excellence	141
Special Projects/Projets spéciaux	141
Medical Education Grants/Subventions en éducation médicale	142
University-Industry Collaborative Research Program/Programme de recherches en équipe université-industrie	142
Career Investigatorships/Chercheurs de carrière	150
MRC Scientists/Scientifiques du CRM	152
University-Industry Research Chairs/Chaires université-industrie de recherche	155
University-Industry Scientists/Scientifiques université-industrie	155
Scholarships/Chercheurs-boursiers	155
University-Industry Scholarships/Chercheurs-boursiers université-industrie	162
Clinician-Scientist Fellowships/Bourses de clinicien-chercheur	163
Centennial Fellowships/Bourses du Centenaire	164
Fellowships/Bourses de recherche	165
Dental Fellowships/Bourses en recherche dentaire	191
University-Industry Fellowships/Bourses de recherche université-industrie	192
Biotechnology Training Centres/Centres de formation supérieure en biotechnologie	193
Studentships/Bourses de stagiaire de recherche	194
Special (International Youth Year) Studentships/Bourses spéciales de stagiaire de recherche (année internationale de la jeunesse)	223
University-Industry Studentships/Bourses de stagiaire de recherche université-industrie	223
Farquharson Research Scholarships/Bourses de recherche Farquharson	223
University-Industry Summer Research Studentships/Bourses d'été pour stagiaires de recherche université-industrie	224
Visiting Scientists/Chercheurs invités	225
France-Canada Exchange Programs/Échanges scientifiques France-Canada	226
Italy-Canada Exchange Program/Échanges scientifiques Italie-Canada	226
Brazil-Canada Exchange Program/Échanges scientifiques Brésil-Canada	226
East European Exchange Program/Programme d'échanges scientifiques avec l'Europe de l'est	226
University-Industry Visiting Program/Programme d'échanges université-industrie	227
Visiting Professorships/Professeurs invités	227
Symposia and Workshops/Colloques et ateliers	228
Travel Grants/Subventions de voyage	229

General Research Grants/Subventions générales de recherche 229
Other Grants and Awards/Autres subventions et bourses 230

Index: grantees, awardees, and supervisors/Index: bénéficiaires de subventions, de bourses et directeurs de recherche 231

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

Operating Grants/Subventions de fonctionnement

Total value/valeur totale: $130,509,648 1990-91.

0001 **ABBOTT, FRANCES V.** — $ 145,979/84-89; 34,856/89-90; 24,399/90-91
Psychiatry, McGill
Experimental and clinical studies of pain and analgesia
MA-8914

0002 **ABBOTT, FRANCES V.** — $ 54,224/89-90; 45,632/90-91
Psychiatry, McGill
ENGLISH, MICHAEL J.M.
Anesthesia, McGill
FRANKLIN, KEITH B.J.
Psychology, McGill
The effect of opioids on the stress and acute phase responses to surgery
1990-91 EP Apr 90–Mar 91
MA-10483

0003 **ABBOTT, FRANK S.** — $ 134,161/84-89; 50,388/89-90; 25,194/90-91
Pharmaceutical Sciences, British Columbia
FARRELL, KEVIN
Pediatrics, British Columbia
ORR, JAMES M.
Pharmaceutical Sciences, British Columbia
Pharmacokinetics, metabolism and drug interactions involving valproic acid metabolites
1990-91 EP Apr 90–Sep 90
MA-8744

0004 **ABBOTT, FRANK S.** — $ 422,854/74-89; 44,125/89-90; 11,138/90-91
Pharmaceutical Sciences, British Columbia
Regulation of acetylcholinesterase and muscarinic receptors
1990-91 EP Apr 90–Jun 90
MT-5595

0005 **ABBOTT, FRANK S.** — $ 128,878/84-89; 42,805/89-90; 21,404/90-91
Pharmaceutical Sciences, British Columbia
Formamides and carbinolamides as unusual drug metabolites
1990-91 EP Apr 90–Sep 90
MA-8890

0006 **ABBOUD, RAJA T.** — $ 27,750/88-89; 37,000/89-90; 43,800/90-91
Medicine, British Columbia
Role of the bronchial protease inhibitor in protecting the lower respiratory tract against proteolytic injury
1990-91 expenditure breakdown: research support, $41,800; equipment, $2,000
1990-91 EP Apr 90–Mar 91
MA-10152

0007 **ABRAHAMS, VIVIAN C.** — $ 1,214,126/63-89; 80,195/89-90; 40,097/90-91
Physiology, Queen's
Sensory and motor aspects of the head motor system
1990-91 EP Apr 90–Sep 90
MT-1487

0008 **ABRAHAMSON, E. WILLIAM** — $ 48,975/89-90; 52,900/90-91
Ophthalmology, Toronto
Light scattering spectrophotometry in visual photoreceptors
1990-91 EP Apr 90–Mar 91
MA-10484

0009 **ACHESON, NICHOLAS H.** — $ 467,577/80-89; 63,000/89-90; 86,239/90-91
Microbiology and Immunology, McGill
Signals and sites for termination of transcription by RNA polymerase II on polyomavirus DNA
1990-91 expenditure breakdown: research support, $79,239; equipment, $7,000
1990-91 EP Apr 90–Mar 91
MA-7281

0010 **ADACHI, JONATHAN D.** — $ 25,838/89-90; 34,450/90-91
Medicine, McMaster
STOLAR, MARGUERITE A.
Medicine, McMaster
BELL, MARY J.
Clinical Epidemiology and Biostatistics, McMaster
TUGWELL, PETER
Clinical Epidemiology and Biostatistics, McMaster
BENSEN, WILLIAM G.
Medicine, McMaster
Fluoride in rheumatoid arthritis
1990-91 EP Apr 90–Mar 91
MT-10486

0011 **ADACHI, KAZUO** — $ 42,100/88-89; 36,300/89-90; 18,604/90-91
Dentistry, Alberta
Studies on the structure and function of the calcium-binding subunit of calcineurin
MA-10170

0012 **ADAMEC, ROBERT E.** — $ 326,187/79-89; 42,461/89-90; 67,842/90-91
Psychology, Memorial University of Newfoundland
Anxiety and epilepsy
1990-91 EP Apr 90–Mar 91
MT-7022

0013 **ADAMS, MARK E.** — $ 256,009/81-89; 44,071/89-90; 44,917/90-91
Medicine, Calgary
Proteoglycans in experimental osteoarthritis
1990-91 EP Apr 90–Mar 91
MA-6858

0014 **ADAMS, PAUL C.** — $ 37,000/89-90; 44,000/90-91
Medicine, Western Ontario
Isolation, purification and characterization of the hepatic ferritin receptor
1990-91 EP Apr 90–Mar 91
MA-10487

0015 **ADAMSON, IAN Y.R.** — $ 182,130/85-89; 53,289/89-90; 58,856/90-91
Pathology, Manitoba
Cellular development in fetal lung
1990-91 EP Apr 90–Mar 91
MA-9349

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0016	**ADAMSON, IAN Y.R.** **BOWDEN, DRUMMOND H.** ***Pathology, Manitoba*** Mechanisms of lung injury and repair **1990-91 EP Apr 90–Mar 91** *MT-3878*	$ 1,021,817/70-89 105,036/89-90 105,036/90-91
0017	**AEBERSOLD, RUEDI** ***Biochemistry, British Columbia*** Tyrosine phosphorylation during T-cell activation: regulation and functional consequences **1990-91 EP Jul 90–Mar 91** *MT-10868*	$ 56,250/90-91
0018	**AGUAYO, ALBERT J.** **BRAY, GARTH M.** ***Medicine, McGill*** Regeneration of synapses in the injured brain of adult mammals **1990-91 EP Apr 90–Mar 91** *MT-2876*	$ 1,130,877/67-89 122,296/89-90 131,213/90-91
0019	**AHMED, ABDUL M.** ***Mechanical Engineering, McGill*** **CHAN, K.-H. CASEY** ***Surgery, McMaster*** **MISRA, ARUN K.** ***Mechanical Engineering, McGill*** Engineering aspects of the design of total joint prostheses and their fixation systems **1990-91 EP Apr 90–Mar 91** *MT-5833*	$ 647,413/76-89 85,552/89-90 90,012/90-91
0020	**AHMED, ABDUL M.** ***Mechanical Engineering, McGill*** **BURKE, DAVID L.** ***Surgery, McGill*** Biomechanics of the knee joint and the lumbar spine related to orthopedics **1990-91 EP Apr 90–Mar 91** *MA-7497*	$ 558,405/82-89 96,883/89-90 96,849/90-91
0021	**ALBERT, PAUL R.** ***Pharmacology and Therapeutics, McGill*** Function and regulation of the rat 5-HT1A receptor gene **1990-91 EP Apr 90–Mar 91** *MT-10568*	$ 53,834/89-90 50,045/90-91
0022	**ALBISSER, A. MICHAEL** ***Biomedical Engineering, Queen's*** Clinical applications of an artificial pancreas **1990-91 EP Apr 90–Mar 91** *MT-5767*	$ 1,658,888/75-89 134,306/89-90 134,306/90-91
0023	**ALBRITTON, WILLIAM L.** ***Medical Microbiology and Infectious Diseases, Alberta*** Genetic studies in the genus Haemophilus **1990-91 EP Apr 90–Mar 91** *MA-9770*	$ 80,099/87-89 58,370/89-90 50,927/90-91
0024	**ALI-KHAN, ZAFER** ***Microbiology and Immunology, McGill*** Amyloid enhancing factor: studies on the pathogenesis of alveolar hydatid cyst-induced reactive amyloidosis and Alzheimer's disease *MA-10172*	$ 95,900/88-89 85,500/89-90 37,406/90-91
0025	**ALLEN, JOHN R.** ***Veterinary Microbiology, Saskatchewan*** Acquired resistance to ticks and mites: allergic dermatitis **1990-91 EP Apr 90–Jun 90** *MT-5315*	$ 511,339/74-89 64,500/89-90 16,125/90-91
0026	**ALLEN, PETER S.** ***Applied Sciences in Medicine, Alberta*** In vivo applications of nuclear magnetic resonance to medicine **1990-91 EP Apr 90–Mar 91** *MA-9682*	$ 187,096/86-89 60,000/89-90 71,250/90-91
0027	**ALLEN, THERESA M.** ***Pharmacology, Alberta*** Liposomes with prolonged circulation half-lives: basic studies and applications **1990-91 EP Apr 90–Mar 91** *MA-9127*	$ 456,085/78-89 93,231/89-90 85,355/90-91
0028	**ALMAZAN, GUILLERMINA** ***Pharmacology and Therapeutics, McGill*** Characterization of an oligodendrocyte precursor cell line **1990-91 EP Apr 90–Mar 91** *MT-10488*	$ 84,051/89-90 55,000/90-91
0029	**ALONSO, ANGEL** ***Neurology and Neurosurgery, McGill*** Excitability and oscillatory properties of entorhinal cortex neurons in vitro *1990-91 expenditure breakdown: research support, $29,498; equipment, $57,396* **1990-91 EP Jul 90–Mar 91** *MA-10914*	$ 86,894/90-91
0030	**AMIT, ZALMAN** **ARAGON, CARLOS G.** ***Psychology, Concordia*** Neuroenzymatic mechanisms mediating voluntary ethanol consumption **1990-91 EP Apr 90–Mar 91** *MT-10489*	$ 42,175/89-90 50,900/90-91
0031	**ANAND-SRIVASTAVA, MADHU B.** ***Physiologie, Montréal*** Atrial natriuretic factor and second messengers **1990-91 EP jlt 90–mar 91** *MA-11024*	$ 44,250/90-91
0032	**ANAND-SRIVASTAVA, MADHU B.** ***Physiologie, Montréal*** Hormonal regulation of adenylate cyclase in cardiovascular system in health and disease **1990-91 EP avr 90–mar 91** *MT-8736*	$ 171,247/84-89 41,224/89-90 50,590/90-91
0033	**ANANTHANARAYANAN, VETTAI S.** ***Biochemistry, McMaster*** Conformational studies on peptides, peptide hormones and proteins **1990-91 EP Apr 90–Mar 91** *MA-8565*	$ 634,463/79-89 190,063/89-90 107,864/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0034	**ANASTASSIADES, TASSOS P.** *Medicine, Queen's* Metabolism of proteoglycans by human mononuclear cells **1990-91 EP Apr 90–Mar 91** *MT-3603*	$ 897,260/89-89 94,554/89-90 95,472/90-91	0044	**ANGEL, AUBIE** *Medicine, Toronto* Molecular characterization and functional significance of the lipoprotein receptor system in adipose tissue **1990-91 EP Apr 90–Mar 91** *MT-3329*	$ 997,735/89-89 87,378/89-90 90,324/90-91
0035	**ANDERSON, COLIN** *Pathology, Western Ontario* Experimental coherence therapy for osteoporosis **1990-91 EP Apr 90–Mar 91** *MA-9836*	$ 83,997/87-89 51,648/89-90 54,360/90-91	0045	**ANGEL, JOSEPH F.** *Biochemistry, Saskatchewan* Nutritional and hormonal regulation of lipogenic enzymes during weaning **1990-91 EP Apr 90–Mar 91** *MA-5868*	$ 378,607/76-89 45,176/89-90 67,349/90-91
0036	**ANDERSON, MAURICE J.** *Pharmacology and Therapeutics, Calgary* Mechanisms of synapse induction **1990-91 EP Apr 90–Mar 91** *MA-8585*	$ 231,483/84-89 52,209/89-90 53,121/90-91	0046	**ANISMAN, HYMIE** *Psychology, Carleton* Stressor effects on catecholamines: genetic factors in relation to depression **1990-91 EP Apr 90–Mar 91** *MT-6486*	$ 435,529/78-89 52,600/89-90 65,110/90-91
0037	**ANDERSON, ROBERT** *Microbiology and Infectious Diseases, Calgary* Host control of viral cell-killing functions **1990-91 EP Apr 90–Mar 91** *MA-5941*	$ 522,641/77-89 67,911/89-90 69,111/90-91	0047	**ANTAKLY, TONY** *Pathologie, Montréal* Interactions of regulatory hormones in pituitary and target cells **1990-91 EP avr 90–mar 91** *MT-7959*	$ 325,139/83-89 87,305/89-90 87,305/90-91
0038	**ANDERSON, W. ALAN** *Biologie, Laval* Diversity, expression and regulation of cytochrome P450 genes in rat liver and in human lymphoid cells **1990-91 EP avr 90–mar 91** *MA-8733*	$ 238,609/84-89 54,577/89-90 60,236/90-91	0048	**ANTEL, JACK P.** *Neurology and Neurosurgery, McGill* Immune-regulatory and effector mechanisms in multiple sclerosis **1990-91 EP Apr 90–Jun 90** *MT-9700*	$ 163,334/86-89 35,274/89-90 13,006/90-91
0039	**ANDERSON, WILLIAM A.** *Anatomy, Manitoba* A morphological characterization of descending pain suppression pathways *MA-9518*	$ 141,884/85-89 45,179/89-90 23,154/90-91	0049	**ANTEL, JACK P.** *Neurology and Neurosurgery, McGill* Cellular immune injury of human oligodendrocytes **1990-91 EP Jul 90–Mar 91** *MT-10952*	$ 71,250/90-91
0040	**ANDREW, MAUREEN E.** *Pediatrics, McMaster* Studies on the pathogenesis and treatment of thrombosis in the pediatric population **1990-91 EP Apr 90–Mar 91** *MT-7595*	$ 280,023/82-89 52,400/89-90 49,963/90-91	0050	**ANTHONISEN, NICHOLAS R.** *Medicine, Manitoba* Factors affecting pulmonary gas exchange *1990-91 expenditure breakdown: research support, $85,064; equipment, $3,700* **1990-91 EP Apr 90–Mar 91** *MT-3535*	$ 972,474/69-89 89,301/89-90 88,764/90-91
0041	**ANDREW, R. DAVID** *Anatomy, Queen's* Seizure and the osmotic state: studies in cortical brain slices **1990-91 EP Apr 90–Mar 91** *MA-7884*	$ 207,675/83-89 51,372/89-90 36,547/90-91	0051	**ANWAR, RASHID A.** *Biochemistry, Toronto* Elastin structure and synthesis and enzymes of bacterial cell wall synthesis **1990-91 EP Apr 90–Mar 91** *MT-1851*	$ 952,479/65-89 77,450/89-90 78,202/90-91
0042	**ANDREWS, DAVID W.** *Biochemistry, McMaster* Protein transport into and across the endoplasmic reticulum membrane **1990-91 EP Apr 90–Mar 91** *MT-10490*	$ 80,238/89-90 64,997/90-91	0052	**ARANDA, JACOB V.** *Pediatrics, McGill* Biochemical mechanisms in the genesis and pharmacotherapy of neonatal apnea **1990-91 EP Apr 90–Jun 90** *MA-10219*	$ 51,938/88-89 48,358/89-90 12,089/90-91
0043	**ANDRULIS, IRENE L.** *Medical Genetics, Toronto* Molecular studies on gene amplification and expression **1990-91 EP Apr 90–Mar 91** *MA-9291*	$ 195,824/85-89 54,631/89-90 62,001/90-91			

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0053	**ARANDA, JACOB V.** *Pediatrics, McGill* Biochemical and pharmacological regulation of cerebral blood flow and bioenergetics in the newborn *1990-91 expenditure breakdown: research support, $79,995; equipment, $25,946* **1990-91 EP Apr 90–Mar 91** *MT-6483*	$ 419,443/78-89 49,687/89-90 105,941/90-91
0054	**ARCHER, MICHAEL C.** *Medical Biophysics, Toronto* Mechanism of tissue specificity in nitrosamine carcinogenesis **1990-91 EP Apr 90–Mar 91** *MT-7025*	$ 624,389/79-89 101,184/89-90 79,463/90-91
0055	**ARCHER, MICHAEL C.** *Medical Biophysics, Toronto* Specificity in the methylation of DNA by carcinogenic N-nitroso compounds **1990-91 EP Apr 90–Mar 91** *MT-10491*	$ 47,100/89-90 62,800/90-91
0056	**ARMOUR, J. ANDREW** *Physiology and Biophysics, Dalhousie* Thoracic autonomic nervous system regulation of the heart **1990-91 EP Apr 90–Mar 91** *MA-10122*	$ 65,943/88-89 60,653/89-90 60,653/90-91
0057	**ARMSTRONG, DAVID T.** *Obstetrics and Gynecology, Western Ontario* **DANIEL, SUSAN A.J.** *University Hospital (London, Ontario)* Ovarian regulation **1990-91 EP Apr 90–Mar 91** *MA-10386*	$ 259,073/89-90 331,485/90-91
0058	**ARMSTRONG, GLEN D.** *Medical Microbiology and Infectious Diseases, Alberta* Investigation of pertussis toxin receptors *1990-91 expenditure breakdown: research support, $61,936; equipment, $2,961* **1990-91 EP Apr 90–Mar 91** *MT-10220*	$ 52,356/88-89 52,356/89-90 64,897/90-91
0059	**ARSENAULT, A. LARRY** *Pathology, McMaster* Mineralization in skeletal tissues: analysis of apatite deposition in matrix vesicles *1990-91 expenditure breakdown: research support, $49,111; equipment, $7,000* **1990-91 EP Apr 90–Mar 91** *MT-8577*	$ 194,522/84-89 49,100/89-90 56,111/90-91
0060	**ARTHUR, GILBERT** *Biochemistry and Molecular Biology, Manitoba* Regulation of ethanolamine glycerophospholipid biosynthesis in mammalian organs *MA-10221*	$ 53,685/88-89 41,000/89-90 21,013/90-91
0061	**ASA, SYLVIA L.** *Pathology, Toronto* In vitro characterization of structure-function correlations in human pituitary adenomas **1990-91 EP Apr 90–Mar 91** *MA-10215*	$ 38,000/88-89 38,000/89-90 42,700/90-91
0062	**ASHBY, PETER** *Medicine, Toronto* Projections of corticospinal pathways in man **1990-91 EP Apr 90–Mar 91** *MA-6727*	$ 240,270/81-89 55,184/89-90 44,275/90-91
0063	**ASSELIN, CLAUDE** *Anatomie et biologie cellulaire, Sherbrooke* Régulation de la transcription du proto-oncogène c-myc *1990-91 ventilation des dépenses: aide à la recherche, $49,125; appareils, $15,000* **1990-91 EP jlt 90–mar 91** *MT-10841*	$ 64,125/90-91
0064	**ASTELL, CAROLINE R.** *Biochemistry, British Columbia* Studies on replication and gene expression of parvoviruses including human pathogenic parvoviruses **1990-91 EP Apr 90–Mar 91** *MT-6728*	$ 468,600/81-89 107,000/89-90 107,000/90-91
0065	**ATKINSON, STEPHANIE A.** *Pediatrics, McMaster* **PAES, BOSCO A.** *Pediatrics, McMaster* **GIBSON, ROSALIND S.** *Family Studies, Guelph* **WEBBER, COLIN E.** *Radiology, McMaster* Mineral bioavailability and ontogeny of regulatory processes of trace mineral metabolism in premature infants **1990-91 EP Apr 90–Mar 91** *MA-8663*	$ 177,553/84-89 46,275/89-90 49,892/90-91
0066	**ATWOOD, HAROLD L.** *Physiology, Toronto* Mechanisms of synaptic plasticity **1990-91 EP Apr 90–Dec 90** *MT-7597*	$ 433,803/82-89 67,869/89-90 51,396/90-91
0067	**AUER, ROLAND N.** *Pathology, Calgary* **TRANMER, BRUCE I.** *Clinical Neurosciences, Calgary* Therapy of cerebral ischemia **1990-91 EP Apr 90–Mar 91** *MA-9935*	$ 102,935/87-89 61,981/89-90 64,197/90-91
0068	**AUERSPERG, NELLY** *Anatomy, British Columbia* Growth and differentiation of human ovarian surface epithelium **1990-91 EP Apr 90–Mar 91** *MA-10185*	$ 41,600/88-89 41,600/89-90 47,593/90-91
0069	**AUGER, FRANCOIS** *Microbiologie, Laval* Optimisation des équivalents cutanés dermo-épidermiques à des fins thérapeutiques et expérimentales **1990-91 EP avr 90–mar 91** *MA-10223*	$ 74,999/88-89 62,900/89-90 65,662/90-91

List No.	Grant/Award	Financial History
0070	**AVOLI, MASSIMO** *Neurology and Neurosurgery, McGill* Cellular mechanisms of epilepsy *1990-91 expenditure breakdown: research support, $51,023; equipment, $25,000* **1990-91 EP Apr 90–Mar 91** *MT-8109*	$ 223,625/83-89 52,530/89-90 76,023/90-91
0071	**AXELRAD, ARTHUR A.** *Anatomy, Toronto* Proliferation and differentiation of erythropoietic progenitors of murine and human bone marrow: molecular mechanisms in polycythemia vera **1990-91 EP Apr 90–Mar 91** *MT-3969*	$ 1,064,330/70-89 88,120/89-90 88,120/90-91
0072	**AXELSON, JAMES E.** *Pharmaceutical Sciences, British Columbia* **RURAK, DANNY W.** *Obstetrics and Gynecology, British Columbia* **MCMORLAND, GRAHAM H.** *Anesthesia, British Columbia* **RIGGS, K. WAYNE** *Pharmaceutical Sciences, British Columbia* Metoclopramide pharmacokinetics: placental transfer, pharmacokinetics and accumulation in fetal fluid compartments in comparison to other amine drugs **1990-91 EP Apr 90–Sep 90** *MA-7027*	$ 288,428/79-89 48,599/89-90 26,646/90-91
0073	**BABIUK, LORNE A.** *Veterinary Microbiology, Saskatchewan* Virus-cell interactions: relationship to persistence and immune destruction **1990-91 EP Apr 90–Mar 91** *MT-5524*	$ 1,351,864/74-89 150,000/89-90 150,000/90-91
0074	**BACCHETTI, SILVIA** *Pathology, McMaster* The role of viral oncogenes in the induction of cytogenetic damage **1990-91 EP Jul 90–Mar 91** *MT-11016*	$ 10,071/90-91
0075	**BACK, DONALD W.** *Biochemistry, Queen's* Regulation of lipogenic enzyme gene expression **1990-91 EP Apr 90–Mar 91** *MA-9936*	$ 96,250/87-89 62,000/89-90 59,000/90-91
0076	**BAG, JNANANKUR** *Molecular Biology and Genetics, Guelph* Post-transcriptional regulation of protein synthesis in muscle cells *MA-9099*	$ 182,997/85-89 49,431/89-90 34,722/90-91
0077	**BAINES, ANDREW D.** *Clinical Biochemistry, Toronto* Kidney and sympathetic nervous system *1990-91 expenditure breakdown: research support, $118,744; equipment, $32,466* **1990-91 EP Apr 90–Mar 91** *MT-3045*	$ 1,093,539/68-89 98,756/89-90 151,210/90-91
0078	**BAINES, MALCOLM G.** *Microbiology and Immunology, McGill* Studies of the immunobiology of reproduction *1990-91 expenditure breakdown: research support, $47,850; equipment, $2,000* **1990-91 EP Jul 90–Mar 91** *MT-11035*	$ 49,850/90-91
0079	**BAIRD, PATRICIA A.** *Medical Genetics, British Columbia* Studies on birth defects and genetic disorders **1990-91 EP Apr 90–Mar 91** *MA-9279*	$ 144,467/85-89 40,973/89-90 45,903/90-91
0080	**BAKER, CURTIS L.** *Psychology, McGill* Neural mechanisms of motion perception **1990-91 EP Apr 90–Mar 91** *MA-9685*	$ 93,566/86-89 39,000/89-90 39,000/90-91
0081	**BAKER, GLEN B.** *Psychiatry, Alberta* **COUTTS, RONALD T.** *Pharmacy and Pharmaceutical Sciences, Alberta* Metabolism and mechanisms of action of monoamine oxidase inhibitors **1990-91 EP Apr 90–Mar 91** *MA-10224*	$ 45,503/88-89 45,503/89-90 49,057/90-91
0082	**BAKER, MICHAEL A.** **SUTHERLAND, D. ROBERT** *Medicine, Toronto* Membrane sialoglycoconjugate and sialyltransferase abnormalities in myeloid leukemias and myeloid differentiation **1990-91 EP Apr 90–Mar 91** *MA-9319*	$ 211,663/85-89 69,865/89-90 70,543/90-91
0083	**BALA, R. MARVIN** **BHAUMICK, BANANI** **SHEPPARD, M. SUZANNE** *Medicine, Saskatchewan* Somatomedins/insulin-like growth factors and related biological growth factors **1990-91 EP Apr 90–Mar 91** *MT-4107*	$ 1,367,869/70-89 125,800/89-90 125,800/90-91
0084	**BALL, ALEXANDER K.** *Biomedical Sciences, McMaster* Studies on inner retinal circuitry modulating function in the outer retina *1990-91 expenditure breakdown: research support, $53,364; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MA-10225*	$ 50,269/88-89 45,681/89-90 63,364/90-91
0085	**BALL, ERIC H.** *Biochemistry, Western Ontario* Mechanisms of cytoskeletal regulation **1990-91 EP Apr 90–Mar 91** *MA-7601*	$ 260,069/82-89 50,304/89-90 50,304/90-91
0086	**BANDIERA, STELVIO M.** *Pharmaceutical Sciences, British Columbia* Regulation and function of constitutive cytochrome P450 isozymes in rat liver **1990-91 EP Apr 90–Mar 91** *MA-10043*	$ 105,100/87-89 58,542/89-90 46,990/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0087	**BARBEAU, HUGUES** *Physical and Occupational Therapy, McGill* Rééducation de patients ayant une lésion de la moelle épinière: nouvelle stratégie d'entraînement locomoteur et d'interventions pharmacologiques **1990-91 EP avr 90–mar 91** *MA-9982*	$ 44,800/87-89 34,861/89-90 30,512/90-91
0088	**BARBER, BRIAN H.** *Immunology, Toronto* A structural and functional analysis of major histocompatibility complex antigens **1990-91 EP Apr 90–Mar 91** *MT-6004*	$ 720,620/77-89 110,000/89-90 110,000/90-91
0089	**BARD, HARRY** *Pédiatrie, Montréal* Stress erythropoiesis and HbF synthesis in the perinatal period **1990-91 EP avr 90–mar 91** *MA-8118*	$ 254,171/83-89 45,840/89-90 46,500/90-91
0090	**BARDAKJIAN, BERJ L.** *Biomedical Engineering, Toronto* Electrical oscillations of gastrointestinal smooth muscle **1990-91 EP Apr 90–Mar 91** *MT-9601*	$ 126,037/85-89 54,716/89-90 48,768/90-91
0091	**BARDEN, NICHOLAS** *Physiologie, Laval* Mood disorders and neuropeptide gene expression **1990-91 EP avr 90–mar 91** *MT-10492*	$ 63,154/89-90 70,472/90-91
0092	**BARNES, STEVEN A.** *Medical Physiology, Calgary* Synaptic influences on the vertebrate photoreceptor response to light **1990-91 EP Jul 90–Mar 91** *MT-10968*	$ 37,351/90-91
0093	**BARR, RONALD G.** *Pediatrics, McGill* **YOUNG, SIMON N.** *Psychiatry, McGill* Tryptophan, diet and newborn arousal and pain response **1990-91 EP Jul 90–Mar 91** *MA-11083*	$ 36,600/90-91
0094	**BASTIN, MARCEL F.** *Microbiologie, Sherbrooke* Structure et fonction des gènes précoces des virus oncogènes à DNA **1990-91 EP avr 90–mar 91** *MA-6731*	$ 452,975/81-89 79,846/89-90 80,621/90-91
0095	**BATES, JASON H.T.** *Medicine, McGill* The development and application of methodologies for the investigation of respiratory mechanics **1990-91 EP Apr 90–Mar 91** *MA-9701*	$ 75,382/86-89 30,663/89-90 30,663/90-91
0096	**BAUMAL, REUBEN** *Pathology, Toronto* **VALLI, VICTOR E.O.** *Veterinary Pathology, Guelph* **THORNER, PAUL S.** *Pathology, Toronto* Renal disease in samoyed dogs as a model for studying hereditary nephritis in man **1990-91 EP Apr 90–Mar 91** *MA-7603*	$ 237,467/82-89 66,775/89-90 66,775/90-91
0097	**BAZETT-JONES, DAVID P.** *Anatomy, Calgary* Morphology of transcription complexes **1990-91 EP Apr 90–Mar 91** *MA-9292*	$ 170,807/85-89 56,544/89-90 59,752/90-91
0098	**BEAR, CHRISTINE E.** *Hospital for Sick Children (Toronto)* Hepatocellular ion conductance **1990-91 EP Apr 90–Mar 91** *MA-10719*	$ 43,161/89-90 46,214/90-91
0099	**BEAUDET, ALAIN** *Neurologie et neurochirurgie, McGill* Contributions morphologiques à l'étude de la neurotransmission chimique **1990-91 EP avr 90–mar 91** *MA-7366*	$ 479,320/80-89 87,357/89-90 88,206/90-91
0100	**BEAUDOIN, ADRIEN R.** *Biologie, Sherbrooke* Caractérisation d'un nouveau type de récepteur d'estrogène *MA-9520*	$ 125,878/85-89 44,504/89-90 31,153/90-91
0101	**BEAULIEU, ANDRE-D.** *Médecine, Laval* The regulation of fibronectin and protein synthesis by polymorphonuclear leukocytes in inflammation **1990-91 EP avr 90–mar 91** *MA-7604*	$ 248,837/82-89 52,330/89-90 52,330/90-91
0102	**BECK, IVAN T.** **DINDA, PARITOSH K.** *Medicine, Queen's* Studies on splanchnic circulation *1990-91 expenditure breakdown: research support, $52,040; equipment, $4,267* **1990-91 EP Apr 90–Mar 91** *MT-9323*	$ 173,393/85-89 49,620/89-90 56,307/90-91
0103	**BECKER, ALLAN B.** **SIMONS, F. ESTELLE R.** *Pediatrics and Child Health, Manitoba* Canine model of asthma *1990-91 expenditure breakdown: research support, $62,753; equipment, $6,212* **1990-91 EP Apr 90–Mar 91** *MA-10270*	$ 62,012/88-89 56,012/89-90 68,965/90-91
0104	**BECKER, ANDREW J.** *Medical Genetics, Toronto* Enzymatic reactions in phage lambda DNA packaging **1990-91 EP Apr 90–Mar 91** *MT-10271*	$ 65,000/88-89 65,000/89-90 72,650/90-91

List No.	Grant/Award	Financial History
0105	**BECKLAKE, MARGARET R.** *Epidemiology and Biostatistics, McGill* **MENZIES, RICHARD I.** *Medicine, McGill* **ERNST, PIERRE-P.** *Epidemiology and Biostatistics, McGill* Lung function in the transition between health and disease **1990-91 EP Apr 90–Mar 91** *MT-2988*	$ 1,096,858/68-89 112,676/89-90 98,622/90-91
0106	**BEDARD, P.-ANDRE** *Biochimie, Montréal* Transcriptional regulation by the pp60v-src oncoprotein *1990-91 ventilation des dépenses: aide à la recherche, $61,814; appareils, $10,431* **1990-91 EP avr 90–mar 91** *MT-10272*	$ 56,311/88-89 47,605/89-90 72,245/90-91
0107	**BEDARD, PAUL J.** *Anatomie, Laval* **FILION, MICHEL** *Physiologie, Laval* Investigation into the pathophysiology of parkinsonian signs and DOPA-induced dyskinesia **1990-91 EP avr 90–mar 91** *MT-5750*	$ 490,556/75-89 94,636/89-90 74,737/90-91
0108	**BEFUS, A. DEAN** *Microbiology and Infectious Diseases, Calgary* The extent and molecular bases of mast cell heterogeneity **1990-91 EP Apr 90–Mar 91** *MT-7034*	$ 756,376/79-89 147,228/89-90 145,835/90-91
0109	**BEFUS, A. DEAN** **HO, MAY** *Microbiology and Infectious Diseases, Calgary* Human liver fluke infection: antigenic analyses and host immune responses *1990-91 expenditure breakdown: research support, $43,925; equipment, $10,099* **1990-91 EP Jul 90–Mar 91** *MT-10993*	$ 54,024/90-91
0110	**BEGIN, RAYMOND** **CANTIN, ANDRE** *Médecine, Sherbrooke* Biologie des pneumoconioses humaines **1990-91 EP avr 90–mar 91** *MT-9956*	$ 147,000/87-89 86,520/89-90 87,360/90-91
0111	**BEGIN, RAYMOND** *Médecine, Sherbrooke* **CANTIN, ANDRE** *Médecine, Sherbrooke* **MASSE, SERGE** *Pathologie, Sherbrooke* Pneumoconiose expérimentale: étude des mécanismes biologiques **1990-91 EP avr 90–mar 91** *MT-7473*	$ 326,937/81-89 75,385/89-90 93,951/90-91
0112	**BEGIN-HEICK, NICOLE** *Biochemistry, Ottawa* Studies on the regulation of adipose tissue adenylate cyclase **1990-91 EP Apr 90–Mar 91** *MT-6063*	$ 451,785/77-89 64,500/89-90 64,500/90-91
0113	**BEGLEITER, ASHER** *Medicine, Manitoba* Antitumor activity of quinones and other free radical generating cancer chemotherapeutic agents **1990-91 EP Apr 90–Mar 91** *MA-8884*	$ 257,022/84-89 63,317/89-90 58,283/90-91
0114	**BEGLEITER, ASHER** **JOHNSTON, JAMES B.** *Medicine, Manitoba* Studies with new anthracyclines **1990-91 EP Apr 90–Mar 91** *MA-8485*	$ 80,844/85-89 28,716/89-90 30,808/90-91
0115	**BELANGER, LUC** *Biochimie, Laval* Regulation of the rat alpha-1-fetoprotein gene **1990-91 EP avr 90–mar 91** *MT-6478*	$ 555,133/78-89 63,036/89-90 73,130/90-91
0116	**BELANGER, PIERRE-M.** *Pharmacie, Laval* Studies on the multiple forms of hepatic microsomal cytochrome P-450 **1990-91 EP avr 90–mar 91** *MA-8691*	$ 186,714/84-89 44,833/89-90 48,445/90-91
0117	**BELANGER, PIERRE-M.** *Pharmacie, Laval* Mechanisms of drug interactions involving non-steroidal anti-inflammatory drugs **1990-91 EP avr 90–mar 91** *MA-7885*	$ 135,885/83-89 64,591/89-90 34,244/90-91
0118	**BELANGER, PIERRE-M.** **TURGEON, JACQUES** *Pharmacie, Laval* Metabolic and pharmacokinetic interactions involving antiarrhythmic agents *1990-91 ventilation des dépenses: aide à la recherche, $39,308; appareils, $4,557* **1990-91 EP jlt 90–mar 91** *MA-10951*	$ 43,865/90-91
0119	**BELISLE, SERGE** *Obstétrique et gynécologie, Montréal* Récepteurs E2 et vieillissement: études des facteurs tissulaires modulant leur dynamique **1990-91 EP avr 90–mar 91** *MA-6732*	$ 353,344/81-89 56,732/89-90 57,283/90-91
0120	**BELISLE, SERGE** *Obstétrique et gynécologie, Montréal* **GALLO-PAYET, NICOLE** *Médecine, Sherbrooke* **BELLABARBA, DIEGO** *Médecine, Sherbrooke* **LEHOUX, JEAN-GUY** *Biochimie, Sherbrooke* **ESCHER, EMANUEL** *Pharmacologie, Sherbrooke* Contrôle paracrinien de la synthèse d'hormones par le placenta humain **1990-91 EP avr 90–mar 91** *MA-7605*	$ 234,893/82-89 60,000/89-90 60,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0121	**BELIVEAU, RICHARD** *Chimie, Québec à Montréal* La réabsorption rénale des phosphates: aspect moléculaire **1990-91 EP avr 90–mar 91** *MA-8716*	$ 209,846/84-89 60,000/89-90 60,000/90-91
0122	**BELL, DAVID A.** *Medicine, Western Ontario* Regulation of B cell, anti-DNA antibody response *MA-5049*	$ 759,672/73-89 75,643/89-90 53,133/90-91
0123	**BELL, JOHN C.** *Medicine, Ottawa* Protein tyrosine kinases in early embryogenesis **1990-91 EP Apr 90–Mar 91** *MA-9852*	$ 138,365/86-89 66,813/89-90 61,455/90-91
0124	**BELLABARBA, DIEGO** *Médecine, Sherbrooke* **LEHOUX, JEAN-GUY** *Biochimie, Sherbrooke* Etude sur la régulation et le développement des récepteurs hormonaux dans l'embryon **1990-91 EP avr 90–mar 91** *MT-3943*	$ 920,267/69-89 89,679/89-90 90,550/90-91
0125	**BELLEMARE, FRANCOIS** *Medicine, McGill* Recruitment pattern and contractile properties of the respiratory muscles *MA-9363*	$ 131,739/85-89 41,431/89-90 33,763/90-91
0126	**BELLWARD, GAIL D.** *Pharmaceutical Sciences, British Columbia* Mechanisms of control of the hepatic cytochrome P-450 drug metabolizing monooxygenases in the rat **1990-91 EP Apr 90–Mar 91** *MA-5944*	$ 541,379/77-89 66,644/89-90 68,459/90-91
0127	**BENCHIMOL, SAMUEL** *Medical Biophysics, Toronto* The role of p53 in Friend virus-induced murine erythroleukemia **1990-91 EP Apr 90–Mar 91** *MA-8671*	$ 203,510/84-89 59,776/89-90 65,975/90-91
0128	**BEND, JOHN R.** *Pharmacology and Toxicology, Western Ontario* Hepatic and extrahepatic cytochrome P-450 monooxygenases: isozyme selective, tissue selective, mechanism-based inhibitors *1990-91 expenditure breakdown: research support, $67,576; equipment, $42,990* **1990-91 EP Apr 90–Mar 91** *MT-9972*	$ 150,175/87-89 66,023/89-90 110,566/90-91
0129	**BENDAYAN, MOISE** *Anatomie, Montréal* Etude morpho-fonctionnelle de la paroi glomérulaire rénale chez le rat rendu expérimentalement diabétique **1990-91 EP avr 90–mar 91** *MA-9702*	$ 130,887/86-89 54,641/89-90 54,641/90-91
0130	**BENDAYAN, MOISE** *Anatomie, Montréal* Pancreatic endocrine-exocrine relationships in normal and diabetic conditions **1990-91 EP avr 90–mar 91** *MT-7284*	$ 617,763/80-89 137,500/89-90 138,836/90-91
0131	**BENISHIN, CHRISTINA G.** *Physiology, Alberta* Identification, characterization, and purification of parathyroid hypertensive factor **1990-91 EP Jul 90–Mar 91** *MA-11033*	$ 28,875/90-91
0132	**BENNETT, BRIAN M.** *Pharmacology and Toxicology, Queen's* Novel approaches to the study of the mechanism of action of organic nitrates **1990-91 EP Apr 90–Mar 91** *MA-9937*	$ 78,950/87-89 42,940/89-90 39,460/90-91
0133	**BENNETT, GARY C.** *Anatomy, McGill* Synthesis of nuclear and cytoplasmic glycoproteins as studied by radioautographic, biochemical and cytochemical techniques **1990-91 EP Apr 90–Mar 91** *MT-5604*	$ 542,149/75-89 65,514/89-90 68,372/90-91
0134	**BENNETT, HUGH P.J.** *Medicine, McGill* Studies on proopiomelanocortin-related peptides **1990-91 EP Apr 90–Mar 91** *MT-6733*	$ 375,808/81-89 67,346/89-90 68,011/90-91
0135	**BENNICK, ANDERS** *Biochemistry, Toronto* Biosynthesis, structure and function of salivary proline-rich proteins **1990-91 EP Apr 90–Mar 91** *MT-4920*	$ 1,078,926/72-89 118,277/89-90 119,425/90-91
0136	**BENOITON, N. LEO** *Biochemistry, Ottawa* Peptide synthesis, principles and practice **1990-91 EP Apr 90–Mar 91** *MT-1181*	$ 1,069,868/62-89 108,077/89-90 95,897/90-91
0137	**BERGERON, JOHN J.M.** *Anatomy, McGill* The molecular cytology of membrane dynamics **1990-91 EP Apr 90–Mar 91** *MT-5605*	$ 1,233,460/75-89 223,287/89-90 223,287/90-91
0138	**BERGERON, MICHEL** *Physiologie, Montréal* Transport des acides aminés au niveau du néphron: rapport ultrastructure-fonction **1990-91 EP avr 90–mar 91** *MT-2862*	$ 1,353,976/67-89 127,361/89-90 127,677/90-91
0139	**BERINSTEIN, NEIL L.** *Medicine, Toronto* Immunoglobulin variation in B cell lymphomas **1990-91 EP Apr 90–Mar 91** *MT-10493*	$ 63,975/89-90 67,500/90-91

List No.	Grant/Award	Financial History
0140	**BERINSTEIN, NEIL L.** *Medicine, Toronto* **MACKENZIE, ROBERT G.** *Radiology, Toronto* **NGAN, BO-YEE** *Pathology, Toronto* **PINKERTON, PETER H.** *Pathology, Toronto* **WILLAN, ANDREW R.** *Preventive Medicine and Biostatistics, Toronto* **DEMBO, ALON J.** *Radiology, Toronto* **REIS, MARCIANO D.O.** *Pathology, Toronto* **SAWKA, CAROL A.** *Medicine, Toronto* **SRIGLEY, JOHN R.** *Pathology, Toronto* Biologic factors in lymphoma *1990-91 expenditure breakdown: research support, $111,165; equipment, $8,682* **1990-91 EP Jul 90–Mar 91** *MT-10856*	$ 119,847/90-91
0141	**BERNIER, MICHEL** *Biochemistry, McGill* Study of the mechanism by which the insulin signal is transmitted **1990-91 EP Jul 90–Oct 90** *MT-10909*	$ 49,130/90-91
0142	**BERNSTEIN, ALAN** *Medical Genetics, Toronto* Gene transfer and gene targeting in mammalian cells **1990-91 EP Apr 90–Mar 91** *MT-5606*	$ 956,405/75-89 126,072/89-90 128,840/90-91
0143	**BERNSTEIN, MARK A.** *Surgery, Toronto* Radiation brain damage: effects of iodine-125 interstitial radiation on normal rat brain **1990-91 EP Apr 90–Mar 91** *MA-10494*	$ 37,541/89-90 50,054/90-91
0144	**BERTELOOT, ALFRED** *Physiologie, Montréal* Régulation des fonctions intestinales de transport en culture **1990-91 EP avr 90–mar 91** *MA-9282*	$ 143,929/85-89 41,855/89-90 43,447/90-91
0145	**BERTELOOT, ALFRED** *Physiologie, Montréal* Transport intestinal des acides aminés **1990-91 EP avr 90–mar 91** *MA-7607*	$ 311,854/82-89 64,000/89-90 64,000/90-91
0146	**BERTHIAUME, YVES** *Medicine, Calgary* The mechanisms of alveolar and lung liquid clearance **1990-91 EP Apr 90–Mar 91** *MA-10273*	$ 50,750/88-89 50,750/89-90 49,137/90-91
0147	**BESNER, JEAN-GUY** *Pharmacie, Montréal* **VARIN, FRANCE** *Pharmacie, Montréal* **DONATI, FRANCOIS** *Anesthesia, McGill* **BEVAN, DAVID R.** *Anesthesia, McGill* Kinetics and dynamics of neuromuscular blocking agents **1990-91 EP avr 90–mar 91** *MA-10274*	$ 51,060/88-89 38,560/89-90 42,358/90-91
0148	**BEVERIDGE, TERRANCE J.** *Microbiology, Guelph* Ultrastructure of bacterial surfaces *1990-91 expenditure breakdown: research support, $70,623; equipment, $13,165* **1990-91 EP Apr 90–Mar 91** *MT-8654*	$ 218,491/84-89 45,065/89-90 83,788/90-91
0149	**BHAT, PANGALA V.** *Médecine, Montréal* Regulation of vitamin A metabolism in rats *MA-9521*	$ 138,750/85-89 45,000/89-90 23,063/90-91
0150	**BHULLAR, RAJINDER P.** *Pathology, McMaster* Role of the novel GTP-binding protein (Gn27) in signal transduction **1990-91 EP Apr 90–Mar 91** *MA-10720*	$ 36,520/89-90 39,650/90-91
0151	**BIBOR-HARDY, VIVIANE** *Médecine, Montréal* Organisation structurale et fonctionnelle de la matrice nucléaire **1990-91 EP avr 90–mar 91** *MT-3368*	$ 1,078,896/68-89 64,880/89-90 64,880/90-91
0152	**BICHET, DANIEL-G.M.** *Médecine, Montréal* Vasopressin and disorders of water excretion *1990-91 ventilation des dépenses: aide à la recherche, $63,863; appareil, $12,193* **1990-91 EP avr 90–mar 91** *MT-8126*	$ 181,413/83-89 49,558/89-90 76,056/90-91
0153	**BIDDLE, FREDERICK G.** *Pediatrics, Calgary* Genetic studies of meiosis in the mouse **1990-91 EP Apr 90–Mar 91** *MA-8060*	$ 277,217/83-89 67,142/89-90 71,043/90-91
0154	**BIDDLE, FREDERICK G.** *Pediatrics, Calgary* Genetic analysis of threshold traits of development in the mouse **1990-91 EP Apr 90–Mar 91** *MT-6736*	$ 436,860/81-89 82,940/89-90 82,940/90-91
0155	**BIEGER, DETLEF** *Pharmacology, Memorial University of Newfoundland* **TRIGGLE, CHRISTOPHER R.** *Pharmacology and Therapeutics, Calgary* Neurogenic and non-neurogenic inhibitory processes in the oesophagus **1990-91 EP Apr 90–Mar 91** *MA-9141*	$ 150,858/85-89 39,923/89-90 40,310/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0156	**BIEGER, DETLEF** **NEUMAN, RICHARD S.** ***Pharmacology, Memorial University of Newfoundland*** Neural mediators and substrates of swallowing and oesophageal peristalsis **1990-91 EP Apr 90–Mar 91** *MT-10495*	$ 80,290/89-90 43,353/90-91
0157	**BIENENSTOCK, JOHN B.** **ERNST, PETER B.** ***Pathology, McMaster*** Studies of the immunology of mucous membranes **1990-91 EP Apr 90–Mar 91** *MT-3393*	$ 2,055,813/69-89 185,302/89-90 188,151/90-91
0158	**BIGGS, DAVID F.** **SURESH, MANVUR R.** ***Pharmacy and Pharmaceutical Sciences, Alberta*** Airway diseases and peptidergic nerves **1990-91 EP Jul 90–Mar 91** *MA-11053*	$ 44,662/90-91
0159	**BILLETTE, JACQUES** ***Physiologie, Montréal*** Electrical activation of the atrioventricular node **1990-91 EP avr 90–mar 91** *MA-7849*	$ 365,459/82-89 91,139/89-90 78,091/90-91
0160	**BIREK, CATALENA** ***Dentistry, Toronto*** A study of oncogenes in odontogenic lesions *1990-91 expenditure breakdown: research support, $32,033; equipment, $2,290* **1990-91 EP Jul 90–Mar 91** *MT-10896*	$ 34,323/90-91
0161	**BIRNBOIM, HYMAN C.** ***Medicine, Ottawa*** Studies of the role of active oxygen species and DNA strand breaks in tumor development **1990-91 EP Apr 90–Mar 91** *MA-8728*	$ 341,139/84-89 76,000/89-90 76,000/90-91
0162	**BISBY, MARK A.** ***Physiology, Queen's*** Regulation of nerve regeneration **1990-91 EP Apr 90–Mar 91** *MT-5198*	$ 543,164/73-89 133,857/89-90 69,877/90-91
0163	**BITTER-SUERMANN, HINRICH** ***Surgery, Dalhousie*** Role of suppressor cells in transplantation tolerance **1990-91 EP Apr 90–Jun 90** *MA-9108*	$ 298,393/85-89 88,250/89-90 22,277/90-91
0164	**BJERKNES, MATTHEW J.** ***Anatomy, Toronto*** Physical basis of morphology **1990-91 EP Apr 90–Mar 91** *MA-8623*	$ 264,574/84-89 79,730/89-90 78,613/90-91
0165	**BKAILY, GHASSAN** ***Physiologie et biophysique, Sherbrooke*** Effets des substances agonistes et antagonistes calciques et des nucléotides cycliques sur le muscle cardiaque *MA-9816*	$ 49,686/87-89 18,092/89-90 9,316/90-91
0166	**BKAILY, GHASSAN** ***Physiologie et biophysique, Sherbrooke*** Effets des substances vasoactives et des antagonistes calciques sur le muscle lisse vasculaire *1990-91 ventilation des dépenses: aide à la recherche, $49,045; appareils, $3,300* **1990-91 EP avr 90–mar 91** *MA-8920*	$ 231,170/84-89 48,345/89-90 52,345/90-91
0167	**BKAILY, GHASSAN** ***Physiologie et biophysique, Sherbrooke*** Electrophysiopathologie de la cardiomyopathie héréditaire **1990-91 EP avr 90–mar 91** *MT-10496*	$ 31,160/89-90 41,547/90-91
0168	**BLAISE, GILBERT A.** **MELOCHE, ROGER** **GIRARD, DOMINIQUE** ***Anesthésie-réanimation, Montréal*** Effet des anesthésiques sur la circulation coronarienne **1990-91 EP avr 90–mar 91** *MA-10044*	$ 62,125/87-89 51,850/89-90 37,300/90-91
0169	**BLASCHUK, OREST W.** ***Surgery, McGill*** Genetic regulation and function of clusterin *MA-10275*	$ 38,000/88-89 36,400/89-90 18,655/90-91
0170	**BLASCHUK, OREST W.** ***Surgery, McGill*** Structure and function of cell adhesion molecules **1990-91 EP Apr 90–Jun 90** *MA-9853*	$ 131,352/86-89 47,937/89-90 11,279/90-91
0171	**BLASCHUK, OREST W.** ***Surgery, McGill*** Regulation and function of cadherins **1990-91 EP Jul 90–Mar 91** *MT-10988*	$ 56,400/90-91
0172	**BLEACKLEY, R. CHRISTOPHER** ***Biochemistry, Alberta*** A family of cytotoxic cell proteases: structure, function and role in disease **1990-91 EP Apr 90–Mar 91** *MA-9938*	$ 70,000/87-89 46,000/89-90 68,500/90-91
0173	**BLENNERHASSETT, MICHAEL G.** **BIENENSTOCK, JOHN B.** ***Pathology, McMaster*** Nerve/mast cell interactions in tissue culture **1990-91 EP Apr 90–Mar 91** *MT-10497*	$ 102,908/89-90 79,278/90-91

List No.	Grant/Award	Financial History
0174	**BLIER, PIERRE** *Psychiatry, McGill* Effects of antidepressant drugs on serotonin neurons *1990-91 expenditure breakdown: research support, $32,625; equipment, $30,000* **1990-91 EP Jul 90–Mar 91** *MA-11014*	$ 62,625/90-91
0175	**BLOSTEIN, RHODA** *Medicine, McGill* Erythrocyte membrane function and maturation, with emphasis on Na,K-ATPase **1990-91 EP Apr 90–Mar 91** *MT-3876*	$ 1,195,348/70-89 104,000/89-90 104,000/90-91
0176	**BOBYN, J. DENNIS** *Surgery, McGill* Tissue response to porous coated implants and non-cemented hip prostheses **1990-91 EP Apr 90–Mar 91** *MT-10498*	$ 76,499/89-90 95,682/90-91
0177	**BOEGMAN, ROLAND J.** *Pharmacology and Toxicology, Queen's* Modulation of neurotransmitter release and neurotoxicity *MA-9118*	$ 157,815/85-89 44,125/89-90 30,994/90-91
0178	**BOGGS, JOAN M.** *Clinical Biochemistry, Toronto* Lipid organization and interactions with proteins in membranes **1990-91 EP Apr 90–Mar 91** *MT-6506*	$ 637,399/78-89 90,000/89-90 90,000/90-91
0179	**BOGNAR, ANDREW L.** *Microbiology, Toronto* Folate polyglutamate biosynthesis in bacteria **1990-91 EP Apr 90–Mar 91** *MA-9822*	$ 108,646/86-89 58,948/89-90 61,857/90-91
0180	**BOILEAU, GUY** *Biochimie, Montréal* Transport et rétention des protéines dans le système vacuolaire central: rôle de la structure protéique **1990-91 EP jlt 90–mar 91** *MT-10979*	$ 35,877/90-91
0181	**BOILEAU, GUY** *Biochimie, Montréal* Transport intracellulaire des protéines membranaires **1990-91 EP avr 90–jul 90** *MA-7608*	$ 341,470/82-89 42,051/89-90 9,894/90-91
0182	**BOISJOLY, HELENE M.** *Otorhinolaryngologie et ophtalmologie, Laval* **BEAULIEU, ANDRE-D.** *Médecine, Laval* Wound healing of the ocular surface **1990-91 EP avr 90–mar 91** *MA-9957*	$ 81,684/87-89 51,529/89-90 43,840/90-91
0183	**BOISJOLY, HELENE M.** *Otorhinolaryngologie et ophtalmologie, Laval* In vitro studies of corneal wound healing agents *1990-91 ventilation des dépenses: aide à la recherche, $40,800; appareils, $7,471* **1990-91 EP avr 90–mar 91** *MA-10276*	$ 42,480/88-89 35,314/89-90 48,271/90-91
0184	**BOISVERT, DONALD P.J.** *Surgery, Alberta* Mechanisms of free radical damage in the brain *1990-91 expenditure breakdown: research support, $36,206; equipment, $7,500* **1990-91 EP Jul 90–Mar 91** *MT-10950*	$ 43,706/90-91
0185	**BORGEAT, PIERRE** *Physiologie, Laval* Studies on the role of leukotrienes and other lipid mediators in the regulation of cellular activities **1990-91 EP avr 90–mar 91** *MT-6451*	$ 528,394/78-89 81,764/89-90 82,498/90-91
0186	**BORTOLUSSI, ROBERT A.** *Pediatrics, Dalhousie* Investigation of host defense mechanisms in the neonate **1990-91 EP Apr 90–Mar 91** *MT-7610*	$ 323,978/82-89 52,004/89-90 52,608/90-91
0187	**BOSE, DEEPAK** *Pharmacology and Therapeutics, Manitoba* Effect of drugs and disease on cardiac excitation-contraction coupling *1990-91 expenditure breakdown: research support, $43,030; equipment, $13,200* **1990-91 EP Apr 90–Mar 91** *MA-8684*	$ 180,091/84-89 43,121/89-90 56,230/90-91
0188	**BOSE, RATNA** *Pharmacology and Therapeutics, Manitoba* Excitation-contraction coupling in tracheal smooth muscle explored with amiloride and its derivatives **1990-91 EP Jul 90–Mar 91** *MT-10942*	$ 34,545/90-91
0189	**BOSE, RATNA D.** *Obstetrics, Gynecology, and Reproductive Sciences, Manitoba* Development of a radioimmunoassay specific for embryo associated immunosuppressor factor **1990-91 EP Jul 90–Mar 91** *MA-11043*	$ 22,745/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0190	**BOUCHARD, CLAUDE** *Education physique, Laval* **THERIAULT, GERMAIN** *Education physique, Laval* **TREMBLAY, ANGELO** *Education physique, Laval* **THIBAULT, MARIE-CHRISTINE** *Physiothérapie, Laval* **LUPIEN, PAUL J.** *Médecine, Laval* **DIONNE, FRANCE T.** *Education physique, Laval* **DESPRES, JEAN-PIERRE** *Education physique, Laval* Energy balance and family line as predictors of 10-year changes in body fat and fat distribution **1990-91 EP avr 90–mar 91** *MA-10499*	$ 93,591/89-90 102,480/90-91
0191	**BOULET, LOUIS-P.** *Médecine, Laval* Physiopathologie de l'asthme et de la toux chronique *MA-8576*	$ 125,116/84-89 29,621/89-90 24,067/90-91
0192	**BOURBONNAIS, DANIEL** **ARSENAULT, A. BERTRAND** **GRAVEL, DENIS** *Réadaptation, Montréal* Caractérisations des syncinésies chez l'hémiplégique **1990-91 EP avr 90–mar 91** *MA-10500*	$ 28,704/89-90 38,272/90-91
0193	**BOURGAUX, PIERRE J.A.** **BOURGAUX-RAMOISY, DANIELLE L.H.G.** *Microbiologie, Sherbrooke* Etude de la recombinaison de haute efficacité dans la cellule de mammifère **1990-91 EP avr 90–mar 91** *MT-8999*	$ 462,509/85-89 130,000/89-90 130,000/90-91
0194	**BOURQUE, CHARLES W.** *Neurology and Neurosurgery, McGill* In vitro analysis of membrane currents and their modulation in supraoptic neurons **1990-91 EP Apr 90–Mar 91** *MA-9939*	$ 143,781/87-89 70,035/89-90 58,869/90-91
0195	**BOUVIER, MICHEL** *Biochimie, Montréal* Beta-adrenergic receptors: molecular mechanisms of regulation **1990-91 EP avr 90–mar 91** *MT-10501*	$ 69,693/89-90 64,711/90-91
0196	**BOWDEN, GEORGE H.W.** *Dentistry, Manitoba* Microbiology of dental disease *1990-91 expenditure breakdown: research support, $83,710; equipment, $2,982* **1990-91 EP Apr 90–Mar 91** *MT-7611*	$ 441,484/82-89 77,139/89-90 86,692/90-91
0197	**BOWEN, C. VAUGHAN A.** *Surgery, Toronto* "Building-block" experiments with microvascular epiphyseal plate transfers *1990-91 expenditure breakdown: research support, $32,548; equipment, $3,075* **1990-91 EP Jul 90–Mar 91** *MA-10882*	$ 35,623/90-91
0198	**BOWES, KENNETH L.** *Surgery, Alberta* **KINGMA, YNTE J.** *Electrical Engineering, Alberta* Gastrointestinal motility studies **1990-91 EP Apr 90–Mar 91** *MA-5946*	$ 533,024/77-89 63,036/89-90 63,648/90-91
0199	**BOWLING, DOUGLAS B.** *Medical Physiology, Calgary* Geniculo-cortical organization in the cat **1990-91 EP Apr 90–Mar 91** *MT-7612*	$ 213,395/82-89 43,272/89-90 47,884/90-91
0200	**BOWNESS, JOHN M.** *Biochemistry and Molecular Biology, Manitoba* Biochemistry of connective tissue repair **1990-91 EP Apr 90–Mar 91** *MA-9191*	$ 134,139/85-89 54,388/89-90 46,904/90-91
0201	**BOYD, NORMAN F.** *Medicine, Toronto* **HEARTWELL, BARBARA J.E.** *Hotel Dieu of St. Joseph (Windsor)* **LEVIN, LESLIE** *Oncology, Western Ontario* **GOETTLER, DIANNE** *London Regional Cancer Centre* An explanatory clinical trial of breast cancer prevention *1990-91 expenditure breakdown: research support, $147,375; equipment, $27,890* **1990-91 EP Jul 90–Mar 91** *MT-10824*	$ 175,265/90-91
0202	**BRADLEY, DAVID E.** *Basic Medical Sciences, Memorial University of Newfoundland* Interaction of drug resistance plasmids with diarrhoeagenic strains of Escherichia coli, and the function of conjugative pili **1990-91 EP Apr 90–Mar 91** *MT-5608*	$ 444,311/75-89 50,260/89-90 50,679/90-91
0203	**BRADLEY, W. EDWARD C.** *Médecine, Montréal* Molecular genetics of small cell lung cancer **1990-91 EP avr 90–mar 91** *MA-9983*	$ 117,250/87-89 89,960/89-90 95,871/90-91
0204	**BRADWEJN, JACQUES** *Psychiatry, McGill* The role of cholecystokinin tetrapeptide in psychiatric disorders **1990-91 EP Apr 90–Mar 91** *MA-10502*	$ 25,661/89-90 34,214/90-91

List No.	Grant/Award	Financial History
0205	**BRADWEJN, JACQUES** *Psychiatry, McGill* Cholecystokinin tetrapeptide as a provocation agent for research in panic disorder **1990-91 EP Jul 90–Mar 91** *MA-11006*	$ 25,380/90-91
0206	**BRAGG, PHILIP D.** *Biochemistry, British Columbia* Biochemical studies of the energy transducing systems of the bacterial cell membrane **1990-91 EP Apr 90–Mar 91** *MT-1854*	$ 1,540,471/65-89 141,831/89-90 143,208/90-91
0207	**BRAKIER-GINGRAS, LEA** *Biochimie, Montréal* Modifications du RNA ribosomique d'Escherichia coli par mutagenèse dirigée; étude des conséquences fonctionnelles de ces modifications *1990-91 ventilation des dépenses: aide à la recherche, $67,752; appareils, $1,250* **1990-91 EP avr 90–mar 91** *MT-9278*	$ 215,848/85-89 63,197/89-90 69,002/90-91
0208	**BRANDL, CHRISTOPHER J.** *Biochemistry, Western Ontario* Transcriptional activation of TATA-less promoters *1990-91 expenditure breakdown: research support, $50,250; equipment, $17,000* **1990-91 EP Jul 90–Mar 91** *MT-10845*	$ 67,250/90-91
0209	**BRANTON, PHILIP E.** *Pathology, McMaster* Mechanisms of oncogenic transformation by human adenoviruses **1990-91 EP Apr 90–Mar 91** *MT-5284*	$ 609,259/74-89 72,491/89-90 82,346/90-91
0210	**BRANTON, PHILIP E.** *Pathology, McMaster* Identification and characterization of phosphotyrosyl phosphatases **1990-91 EP Apr 90–Mar 91** *MA-8582*	$ 221,789/84-89 54,454/89-90 54,867/90-91
0211	**BRASH, JOHN L.** *Chemical Engineering, McMaster* Studies of blood-material interactions related to the development of blood-compatible biomaterials **1990-91 EP Apr 90–Mar 91** *MT-5807*	$ 874,568/76-89 135,855/89-90 135,855/90-91
0212	**BRAUN, PETER E.** *Biochemistry, McGill* Structure and biological assembly of myelin **1990-91 EP Apr 90–Mar 91** *MT-4941*	$ 735,932/73-89 71,336/89-90 72,028/90-91
0213	**BRAWER, JAMES R.** *Anatomy, McGill* The pathogenesis and nature of estradiol-induced anovulation **1990-91 EP Apr 90–Mar 91** *MT-9239*	$ 266,250/85-89 53,000/89-90 55,000/90-
0214	**BRAYER, GARY D.** *Biochemistry, British Columbia* Structure-function studies of cytochrome c **1990-91 EP Apr 90–Mar 91** *MA-7975*	$ 313,713/83-89 81,064/89-90 80,736/90-91
0215	**BRAYER, GARY D.** *Biochemistry, British Columbia* **WITHERS, STEPHEN G.** *Chemistry, British Columbia* Structure-function studies of human pancreatic alpha-amylase **1990-91 EP Jul 90–Mar 91** *MT-10940*	$ 47,250/90-91
0216	**BRECKENRIDGE, W. CARL** *Biochemistry, Dalhousie* Studies of serum phospholipid and lipoprotein metabolism **1990-91 EP Apr 90–Mar 91** *MT-7365*	$ 484,119/80-89 76,694/89-90 82,462/90-91
0217	**BREITMAN, MARTIN L.** **TSUI, LAP-CHEE** *Medical Genetics, Toronto* Regulation of crystallin gene expression in eye lens development **1990-91 EP Apr 90–Mar 91** *MT-9293*	$ 416,500/85-89 146,000/89-90 146,000/90-91
0218	**BREITMAN, MARTIN L.** *Medical Genetics, Toronto* Molecular genetic investigations of mouse development **1990-91 EP Apr 90–Mar 91** *MA-10186*	$ 80,000/88-89 80,000/89-90 80,000/90-91
0219	**BREM, STEVEN** *Neurology and Neurosurgery, McGill* In situ inhibition of endothelial cell proliferation and brain tumor development by extracellular modulators of angiogenesis, demonstrated by a monoclonal antibody to bromodeoxyuridine **1990-91 EP Apr 90–Mar 91** *MA-10503*	$ 55,259/89-90 66,345/90-91
0220	**BRESSLER, BERNARD H.** *Anatomy, British Columbia* Contractile properties of skeletal muscle **1990-91 EP Apr 90–Mar 91** *MT-5202*	$ 441,826/74-89 63,022/89-90 49,476/90-91
0221	**BRETSCHER, PETER A.** *Microbiology, Saskatchewan* Antigen-specific regulation and modulation of the immune response **1990-91 EP Apr 90–Mar 91** *MA-8647*	$ 311,604/84-89 53,600/89-90 56,141/90-91
0222	**BRIDGER, WILLIAM A.** *Biochemistry, Alberta* Enzyme structure, function and assembly **1990-91 EP Apr 90–Mar 91** *MT-2805*	$ 1,213,191/67-89 115,566/89-90 136,507/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0223	**BRIEDIS, DALIUS J.** *Microbiology and Immunology, McGill* Gene expression among negative-stranded RNA viruses *1990-91 expenditure breakdown: research support, $63,003; equipment, $3,951* **1990-91 EP Apr 90–Mar 91** *MT-7613*	$ 385,397/82-89 60,919/89-90 66,954/90-91
0224	**BRIEN, JAMES F.** *Pharmacology and Toxicology, Queen's* Effects of in utero ethanol exposure: prenatal and postnatal studies **1990-91 EP Apr 90–Mar 91** *MA-8073*	$ 201,179/83-89 45,454/89-90 40,032/90-91
0225	**BRINDLEY, DAVID N.** *Biochemistry, Alberta* Regulation of triacylglycerol synthesis in liver and adipose tissue through phosphatidate phosphohydrolase **1990-91 EP Apr 90–Mar 91** *MT-10504*	$ 75,000/89-90 100,000/90-91
0226	**BRISSETTE, LOUISE** *Médecine, Montréal* Characterization of the "lipoprotein binding site" *1990-91 ventilation des dépenses: aide à la recherche, $37,200; appareils, $15,000* **1990-91 EP jlt 90–mar 91** *MT-10888*	$ 52,200/90-91
0227	**BRISSON, NORMAND** *Biochimie, Montréal* Biologie moléculaire d'une phosphorylase de l'amidon **1990-91 EP avr 90–mar 91** *MT-9294*	$ 159,159/85-89 44,125/89-90 56,397/90-91
0228	**BROCKHAUSEN, INKA H.** *Hospital for Sick Children (Toronto)* Biosynthesis and functions of O-glycans *1990-91 expenditure breakdown: research support, $43,955; equipment, $9,500* **1990-91 EP Jul 90–Mar 91** *MT-10961*	$ 53,455/90-91
0229	**BRODEUR, JULES** *Médecine du travail et hygiène du milieu, Montréal* Interprétation des paramètres de surveillance biologique de l'exposition à des solvants aromatiques à l'aide de la simulation pharmacocinétique à base physiologique: étude animale **1990-91 EP jlt 90–mar 91** *MT-11003*	$ 44,869/90-91
0230	**BRODEUR, JULES** *Médecine du travail et hygiène du milieu, Montréal* La signification toxicologique des thioéthers urinaires après exposition à des substances transformées en électrophiles *1990-91 ventilation des dépenses: aide à la recherche, $61,850; appareils, $2,000* **1990-91 EP avr 90–mar 91** *MT-8943*	$ 201,936/84-89 52,530/89-90 63,850/90-91
0231	**BRODT, PNINA** *Surgery, McGill* Hepatic metastasis: cellular and molecular aspects **1990-91 EP Apr 90–Mar 91** *MT-10505*	$ 57,930/89-90 77,240/90-91
0232	**BRONSKILL, MICHAEL J.** **HENKELMAN, R. MARK** *Medical Biophysics, Toronto* Physical studies of magnetic resonance imaging **1990-91 EP Apr 90–Mar 91** *MT-7888*	$ 268,182/83-89 89,743/89-90 89,743/90-91
0233	**BROOKS, DONALD E.** *Pathology, British Columbia* Cell surface structure and reactivity **1990-91 EP Apr 90–Mar 91** *MT-5759*	$ 1,317,468/75-89 148,320/89-90 139,740/90-91
0234	**BROSNAN, JOHN T.** *Biochemistry, Memorial University of Newfoundland* Amino acid metabolism **1990-91 EP Apr 90–Mar 91** *MT-4643*	$ 983,861/72-89 142,785/89-90 119,259/90-91
0235	**BROSNAN, MARGARET E.** *Biochemistry, Memorial University of Newfoundland* Metabolism and function of polyamines and amino acids **1990-91 EP Apr 90–Mar 91** *MT-6635*	$ 521,332/78-89 73,542/89-90 76,176/90-91
0236	**BROUGHTON, ROGER J.** *Medicine, Ottawa* Investigation of neurological sleep disorders **1990-91 EP Apr 90–Mar 91** *MT-3291*	$ 808,785/72-89 140,875/89-90 99,924/90-91
0237	**BROWN, DAVID L.** *Biology, Ottawa* **CHALY, NATHALIE** *Biology, Carleton* Regulation of chromatin architecture during lymphocyte activation *1990-91 expenditure breakdown: research support, $60,391; equipment, $3,000* **1990-91 EP Apr 90–Mar 91** *MT-6934*	$ 551,986/81-89 76,684/89-90 63,391/90-91
0238	**BROWN, GREGORY M.** *Biomedical Sciences, McMaster* Role of N-acetylserotonin in the central nervous system **1990-91 EP Apr 90–Mar 91** *MA-10279*	$ 45,000/88-89 45,000/89-90 46,350/90-91
0239	**BROWN, IAN R.** *Life Sciences, Toronto* Events in mammalian brain tissue following administration of a psychotropic drug or induction of hyperthermia **1990-91 EP Apr 90–Mar 91** *MT-6066*	$ 477,193/77-89 64,100/89-90 64,722/90-91

List No.	Grant/Award	Financial History
0240	**BROWN, MARTHA** *Microbiology, Toronto* Characterization of the fastidious enteric adenoviruses types 40 and 41 *MA-8656*	$ 236,804/84-89 54,811/89-90 28,091/90-91
0241	**BROWNSEY, ROGER W.** *Biochemistry, British Columbia* Studies on the mechanism of action of insulin *1990-91 expenditure breakdown: research support, $77,290; equipment, $9,228* **1990-91 EP Apr 90–Mar 91** *MT-8676*	$ 252,138/84-89 50,000/89-90 86,518/90-91
0242	**BRUBAKER, PATRICIA L.** *Physiology, Toronto* Tissue-specific synthesis, processing and secretion of glucagon-related peptides in pancreas and intestine **1990-91 EP Apr 90–Mar 91** *MA-9940*	$ 52,099/87-89 36,217/89-90 36,073/90-91
0243	**BRUCHOVSKY, NICHOLAS** *Medicine, British Columbia* Mechanisms of action of testosterone **1990-91 EP Apr 90–Mar 91** *MT-3729*	$ 1,089,269/69-89 92,824/89-90 97,615/90-91
0244	**BRUNENGRABER, HENRI** *Nutrition, Montréal* Regulation of metabolic pathways in liver **1990-91 EP avr 90–jui 90** *MA-9771*	$ 160,198/87-89 94,554/89-90 23,868/90-91
0245	**BRUNETTE, DONALD M.** *Dentistry, British Columbia* Regulation of growth and behaviour of cells in vitro and in vivo **1990-91 EP Apr 90–Mar 91** *MA-7617*	$ 307,513/82-89 82,619/89-90 81,260/90-91
0246	**BRUNETTE, JEAN REAL** **OLIVIER, PATRICK** *Chirurgie, Sherbrooke* Identification et caractérisation ERG clinique des fonctions réniennes **1990-91 EP avr 90–mar 91** *MT-2593*	$ 902,918/87-89 71,232/89-90 71,232/90-91
0247	**BRUNTON, JAMES L.** *Medicine, Toronto* Replication of Haemophilus plasmids *1990-91 expenditure breakdown: research support, $49,313; equipment, $2,900* **1990-91 EP Jul 90–Mar 91** *MT-10943*	$ 52,213/90-91
0248	**BRYAN, A. CHARLES** *Anesthesia, Toronto* **BRYAN, M. HEATHER** *Pediatrics, Toronto* Causes and consequences of lung injury in infants **1990-91 EP Apr 90–Jun 90** *MA-6342*	$ 307,218/78-89 112,807/89-90 28,476/90-91

N° de liste	Subvention/Bourse	Résumé financier
0249	**BRYAN, LAWRENCE E.** *Microbiology and Infectious Diseases, Calgary* Mechanisms of persistence in clinically significant bacteria **1990-91 EP Apr 90–Mar 91** *MT-4350*	$ 891,625/71-89 105,060/89-90 116,158/90-91
0250	**BUB, DANIEL N.** **MEYER, ERNST G.** **CHERTKOW, HOWARD M.** **EVANS, ALAN C.** *Neurology and Neurosurgery, McGill* The functional neuroanatomy of cognitive processes studied by positron emission tomography **1990-91 EP Apr 90–Mar 91** *MA-10506*	$ 51,500/89-90 62,000/90-91
0251	**BUB, DANIEL N.** *Neurology and Neurosurgery, McGill* **BLACK, SANDRA E.** *Medicine, Toronto* Cognitive and neural bases of simultanagnosia and pure alexia **1990-91 EP Apr 90–Mar 91** *MA-9599*	$ 122,026/85-89 25,700/89-90 25,700/90-91
0252	**BUCHWALD, MANUEL** *Medical Genetics, Toronto* Genetic studies of the cellular response to DNA crosslinking and in Fanconi's anemia **1990-91 EP Apr 90–Mar 91** *MT-7220*	$ 666,029/80-89 96,800/89-90 96,800/90-91
0253	**BUICK, RONALD N.** *Medical Biophysics, Toronto* Epidermal growth factor-mediated growth control and signal transduction in human breast cancer cells **1990-91 EP Apr 90–Mar 91** *MA-8162*	$ 279,108/83-89 71,068/89-90 82,527/90-91
0254	**BUKOWIECKI, LUDWIK J.** *Physiologie, Laval* Regulation of energy metabolism **1990-91 EP avr 90–mar 91** *MT-6018*	$ 660,985/77-89 103,620/89-90 86,960/90-91
0255	**BULLOCH, ANDREW G.M.** **LUKOWIAK, KENNETH D.** *Medical Physiology, Calgary* Regulation of peripheral nervous system and central nervous system synapses *MA-9229*	$ 136,541/85-89 36,792/89-90 18,945/90-91
0256	**BULLOCH, ANDREW G.M.** *Medical Physiology, Calgary* Modulation of sprouting by adult neurons **1990-91 EP Apr 90–Mar 91** *MT-7619*	$ 288,951/82-89 59,842/89-90 56,225/90-91
0257	**BUREAU, MICHEL A.** *Pédiatrie, Sherbrooke* Critical role of the peripheral chemoreceptors after birth **1990-91 EP avr 90–mar 91** *MT-7137*	$ 469,419/79-89 80,896/89-90 81,682/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0258	**BURGESS, ARTHUR E.** ***Radiology, British Columbia*** Investigation of visual signal detection efficiency **1990-91 EP Apr 90–Mar 91** *MT-7621*	$ 364,622/82-89 56,522/89-90 56,193/90-91	0266	**BYERS, DAVID M.** ***Pediatrics, Dalhousie*** Fatty acid metabolism in bioluminescent bacteria *1990-91 expenditure breakdown: research support, $48,138; equipment, $2,100* **1990-91 EP Apr 90–Mar 91** *MT-10283*	$ 40,560/88-89 40,560/89-90 50,238/90-91
0259	**BURKE, ROBERT D.** ***Biology, Victoria*** Molecular basis of morphogenesis: gastrulation **1990-91 EP Apr 90–Mar 91** *MT-10280*	$ 53,000/88-89 45,000/89-90 49,500/90-91	0267	**CALARESU, FRANCO R.** ***Physiology, Western Ontario*** Physiological studies of central and peripheral pathways of cardiovascular reflexes **1990-91 EP Apr 90–Mar 91** *MT-2096*	$ 1,015,796/66-89 77,019/89-90 73,709/90-91
0260	**BURNESS, ALFRED T.H.** ***Basic Medical Sciences, Memorial University of Newfoundland*** Characterization of cellular receptors for animal viruses *1990-91 expenditure breakdown: research support, $60,102; equipment, $1,200* **1990-91 EP Apr 90–Mar 91** *MA-10281*	$ 61,828/88-89 55,280/89-90 61,302/90-91	0268	**CALLAHAN, JOHN W.** ***Pediatrics, Toronto*** Structure-function relationships in beta-galactosidase, sphingomyelinase and their associated diseases *1990-91 expenditure breakdown: research support, $79,250; equipment, $2,500* **1990-91 EP Apr 90–Mar 91** *MT-10427*	$ 57,300/88-89 76,400/89-90 81,750/90-91
0261	**BURT, HELEN M.** ***Pharmaceutical Sciences, British Columbia*** Crystal-induced inflammation: a study of the mechanisms of crystal-membrane interactions and the influence of endogenous factors and antiinflammatory drugs on such interactions *1990-91 expenditure breakdown: research support, $42,370; equipment, $13,560* **1990-91 EP Apr 90–Mar 91** *MT-7833*	$ 193,981/82-89 38,910/89-90 55,930/90-91	0269	**CALVERT, RAYMOND** ***Anatomie et biologie cellulaire, Sherbrooke*** Etude de la différenciation morphologique et fonctionnelle de la muqueuse intestinale chez la souris foetale *1990-91 ventilation des dépenses: aide à la recherche, $69,624; appareils, $3,500* **1990-91 EP avr 90–mar 91** *MT-6069*	$ 509,928/77-89 64,536/89-90 73,124/90-91
0262	**BUSHNELL, M. CATHERINE** **DUNCAN, GARY H.** ***Médecine dentaire, Montréal*** The role of thalamus in pain perception **1990-91 EP avr 90–mar 91** *MA-9772*	$ 71,199/87-89 59,766/89-90 57,597/90-91	0270	**CAMERMAN, NORMAN** ***Biochemistry, Toronto*** Structure determinations of anti-AIDS agents **1990-91 EP Apr 90–Mar 91** *MA-10104*	$ 47,500/87-89 30,000/89-90 31,250/90-91
0263	**BUTTERWORTH, ROGER F.** ***Médecine, Montréal*** Pathophysiology of thiamine-deficiency disorders **1990-91 EP avr 90–mar 91** *MT-9156*	$ 141,169/85-89 47,175/89-90 51,068/90-91	0271	**CAMERMAN, NORMAN** ***Biochemistry, Toronto*** Stereochemical studies of anticancer agents and peptide hormones **1990-91 EP Apr 90–Mar 91** *MT-4695*	$ 629,490/72-89 56,050/89-90 56,594/90-91
0264	**BUTTERWORTH, ROGER F.** ***Médecine, Montréal*** Studies of the pathophysiology of cerebral dysfunction in acute and chronic liver failure *1990-91 ventilation des dépenses: aide à la recherche, $63,560; appareils, $6,295* **1990-91 EP avr 90–mar 91** *MT-10282*	$ 44,185/88-89 37,725/89-90 69,855/90-91	0272	**CAMPLING, BARBARA G.** ***Oncology, Queen's*** **LAM, YUK-MIU** ***Community Health and Epidemiology, Queen's*** Clinical application of the MTT assay *1990-91 expenditure breakdown: research support, $51,375; equipment, $6,500* **1990-91 EP Jul 90–Mar 91** *MT-10980*	$ 57,875/90-91
0265	**BUTTERWORTH, ROGER F.** ***Médecine, Montréal*** Wernicke's encephalopathy in AIDS patients treated with azidothymidine **1990-91 EP avr 90–mar 91** *MA-10794*	$ 24,773/89-90 42,345/90-91	0273	**CAMPLING, BARBARA G.** ***Oncology, Queen's*** Clinical drug resistance in small cell lung cancer **1990-91 EP Jul 90–Mar 91** *MT-10846*	$ 52,321/90-91

List No.	Grant/Award	Financial History
0274	**CANDIDO, E. PETER M.** ***Biochemistry, British Columbia*** Gene structure and regulation in Caenorhabditis elegans **1990-91 EP Apr 90–Mar 91** *MT-5199*	$ 659,745/73-89 91,433/89-90 95,915/90-91
0275	**CANTIN, ANDRE** ***Médecine, Sherbrooke*** Etudes des mécanismes inflammatoires et de fibrogenèse dans l'alvéolite fibrosante idiopathique **1990-91 EP avr 90–mar 91** *MA-9524*	$ 121,050/85-89 41,000/89-90 41,000/90-91
0276	**CAPEK, RADAN** **ESPLIN, BARBARA** ***Pharmacology and Therapeutics, McGill*** Neurotransmitters and drug action in the central nervous system **1990-91 EP Apr 90–Mar 91** *MT-9354*	$ 211,651/85-89 54,495/89-90 54,495/90-91
0277	**CAPONE, JOHN P.** ***Biochemistry, McMaster*** Studies on herpes simplex virus and mammalian cell gene expresaion and function **1990-91 EP Apr 90–Mar 91** *MA-9837*	$ 135,580/86-89 55,629/89-90 57,681/90-91
0278	**CARBONETTO, SALVATORE T.** ***Neurology and Neurosurgery, McGill*** Structural and functional studies of a high affinity laminin receptor in neural cells **1990-91 EP Apr 90–Mar 91** *MA-9000*	$ 186,824/85-89 66,774/89-90 70,465/90-91
0279	**CARBONETTO, SALVATORE T.** ***Neurology and Neurosurgery, McGill*** Regulation of extracellular matrix receptors and nerve fiber growth **1990-91 EP Apr 90–Mar 91** *MA-10182*	$ 27,950/88-89 27,950/89-90 37,244/90-91
0280	**CARDINAL, JEAN** ***Médecine, Montréal*** **LAPRADE, RAYNALD** ***Physique, Montréal*** Etude du transport des ions au niveau des cellules du tube proximal de rein perfusé in vitro **1990-91 EP avr 90–mar 91** *MA-4944*	$ 666,941/73-89 76,297/89-90 68,965/90-91
0281	**CARETTE, SIMON** ***Médecine, Laval*** **MARCOUX, SYLVIE** ***Médecine sociale et préventive, Laval*** **TRUCHON, RENE** ***Anesthésie-réanimation, Laval*** Evaluation of apophyseal joint injection of corticosteroids in chronic low back pain: a randomized double-blind placebo controlled trial **1990-91 EP avr 90–jui 90** *MA-10045*	$ 33,157/87-89 19,074/89-90 4,788/90-91
0282	**CARLEN, PETER L.** ***Medicine, Toronto*** Central mammalian neurons in vitro: modelling, modulation and psychoactive drug actions **1990-91 EP Apr 90–Mar 91** *MT-7890*	$ 356,142/83-89 87,726/89-90 74,487/90-91
0283	**CARLSON, JOHN C.** ***Biology, Waterloo*** Studies on the mechanism controlling corpus luteum regression **1990-91 EP Apr 90–Mar 91** *MA-10658*	$ 38,182/89-90 48,242/90-91
0284	**CARMICHAEL, FREDERICK J.** ***Anesthesia, Toronto*** **ORREGO, HECTOR** ***Medicine, Toronto*** Effect of propylthiouracil and acetate on ethanol-induced liver hypoxia **1990-91 EP Apr 90–Mar 91** *MT-10659*	$ 32,318/89-90 43,090/90-91
0285	**CARNEGIE, JACQUELINE A.** ***Obstetrics and Gynecology, Ottawa*** Extracellular matrix components and the preimplantation rat conceptus **1990-91 EP Apr 90–Mar 91** *MA-10046*	$ 76,250/87-89 40,200/89-90 40,600/90-91
0286	**CARRIERE, SERGE** ***Médecine, Montréal*** Catécholamines et réabsorption sodée par le rein **1990-91 EP avr 90–mar 91** *MT-3134*	$ 1,294,316/68-89 116,964/89-90 118,104/90-91
0287	**CARROLL, KENNETH K.** ***Biochemistry, Western Ontario*** Studies on lipids and lipid metabolism **1990-91 EP Apr 90–Mar 91** *MT-1561*	$ 1,093,738/64-89 86,149/89-90 82,117/90-91
0288	**CARSTENS, ERIC B.** ***Microbiology and Immunology, Queen's*** Replication of baculovirus *1990-91 expenditure breakdown: research support, $66,718; equipment, $16,346* **1990-91 EP Apr 90–Mar 91** *MT-7624*	$ 397,900/82-89 61,303/89-90 83,064/90-91
0289	**CARVER, JEREMY P.** ***Medical Genetics, Toronto*** N-linked oligosaccharides: relation of three-dimensional structure to function **1990-91 EP Apr 90–Mar 91** *MT-3732*	$ 1,202,843/69-89 131,325/89-90 132,600/90-91
0290	**CASANOVA, CHRISTIAN F.P.** ***Chirurgie, Sherbrooke*** Etude des relations réciproques entre le cortex visuel et le complexe noyau latéral postérieur-pulvinar *1990-91 ventilation des dépenses: aide à la recherche, $32,250; appareils, $50,000* **1990-91 EP jlt 90–mar 91** *MT-10962*	$ 82,250/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0291	**CASE, BRUCE W.** *Occupational Health, McGill* Biological estimation of chrysotile and tremolite exposure: a multidisciplinary study **1990-91 EP Apr 90–Jun 90** *MA-8578*	$ 143,688/84-89 36,879/89-90 9,220/90-91
0292	**CASPER, ROBERT F.J.** *Obstetrics and Gynecology, Toronto* Endogenous opioid peptides and human reproduction **1990-91 EP Apr 90–Mar 91** *MA-10428*	$ 58,575/88-89 65,700/89-90 65,700/90-91
0293	**CASTELLUCCI, VINCENT F.** *Médecine, Montréal* Cellular and molecular analysis of long-term memory in simple neuronal networks **1990-91 EP avr 90–mar 91** *MA-10047*	$ 104,608/87-89 65,147/89-90 64,840/90-91
0294	**CASTONGUAY, ANDRE** *Pharmacie, Laval* Activation and deactivation pathways of nicotine derived N-nitrosamines **1990-91 EP avr 90–mar 91** *MA-9959*	$ 88,575/87-89 70,901/89-90 45,269/90-91
0295	**CATES, GEORGE A.** *Biochemistry, Queen's* Glycoprotein involvement in skeletal muscle differentiation *MA-9525*	$ 166,744/85-89 50,592/89-90 41,106/90-91
0296	**CATTINI, PETER A.** *Physiology, Manitoba* Characterization of human placenta growth hormone genes *1990-91 expenditure breakdown: research support, $52,500; equipment, $2,500* **1990-91 EP Jul 90–Mar 91** *MT-10853*	$ 55,000/90-91
0297	**CATTINI, PETER A.** *Physiology, Manitoba* Regulation of the human growth hormone gene family **1990-91 EP Apr 90–Jun 90** *MA-10048*	$ 121,500/87-89 42,500/89-90 10,000/90-91
0298	**CAVALIER-SMITH, THOMAS** *Botany, British Columbia* Nuclear and genomic organisation of Giardia **1990-91 EP Apr 90–Mar 91** *MT-10660*	$ 115,190/89-90 62,120/90-91
0299	**CAVERSON, MONICA M.** *Anatomy, Western Ontario* Central mechanisms controlling vagal cardiomotor neuron activity **1990-91 EP Apr 90–Mar 91** *MA-10256*	$ 49,416/88-89 41,888/89-90 44,370/90-91
0300	**CEDERGREN, ROBERT J.** *Biochimie, Montréal* The design and modelling of small RNAs **1990-91 EP avr 90–mar 91** *MT-3322*	$ 841,180/68-89 85,000/89-90 85,000/90-91
0301	**CHABOT, BENOIT** *Microbiologie, Sherbrooke* Epissage alternatif des ARNs prémessagers des cellules de mammifères **1990-91 EP avr 90–mar 91** *MT-10507*	$ 75,750/89-90 73,000/90-91
0302	**CHACONAS, GEORGE** *Biochemistry, Western Ontario* Mechanism of bacteriophage Mu DNA transposition **1990-91 EP Apr 90–Mar 91** *MT-8155*	$ 274,455/83-89 103,790/89-90 104,798/90-91
0303	**CHADEE, KHRISENDATH** *Parasitology, McGill* Colonic mucin glycoprotein biosynthesis, secretion and function in infectious diseases **1990-91 EP Apr 90–Mar 91** *MA-10187*	$ 61,500/88-89 51,500/89-90 55,813/90-91
0304	**CHAKRABARTI, SAROJ K.** *Médecine du travail et hygiène du milieu, Montréal* **COTE, MICHEL G.** *Pharmacologie, Montréal* Nephrotoxicity of glutathione and cysteine conjugates of styrene, bromobenzene and dichloroethane using isolated renal subcellular organelles **1990-91 EP avr 90–mar 91** *MA-9705*	$ 132,882/86-89 53,318/89-90 53,318/90-91
0305	**CHAN, ALVIN C.** *Biochemistry, Ottawa* Regulation of eicosanoid biosynthesis **1990-91 EP Apr 90–Mar 91** *MA-7626*	$ 273,133/82-89 45,443/89-90 51,732/90-91
0306	**CHAN, CATHERINE B.** *Atlantic Veterinary College, Prince Edward Island* Hyperinsulinemia in obese (fa/fa) rats **1990-91 EP Apr 90–Mar 91** *MT-10508*	$ 49,596/89-90 63,515/90-91
0307	**CHAN, EDDIE C.S.** *Microbiology and Immunology, McGill* **SIBOO, RUSSELL** *Microbiology and Immunology, McGill* **AL-JOBURI, WESAM** *Dentistry, McGill* Isolation, characterization, and mechanisms of pathogenicity of oral spirochetes **1990-91 EP Apr 90–Mar 91** *MA-10509*	$ 46,506/89-90 50,675/90-91
0308	**CHAN, JOHN Y.C.** *Medicine, Toronto* Hormonal and transcriptional regulation of p70 thyroid autoantigen gene *1990-91 expenditure breakdown: research support, $46,500; equipment, $15,000* **1990-91 EP Jul 90–Mar 91** *MT-10918*	$ 61,500/90-91

List No.	Grant/Award	Financial History
0309	**CHAN, VOON-LOONG** *Microbiology, Toronto* Molecular genetics of Campylobacter **1990-91 EP Apr 90–Mar 91** *MT-10511*	$ 54,000/89-90 64,000/90-91
0310	**CHAN, WILLIAM W.-C.** *Biochemistry, McMaster* Interactions at the active site of enzymes *1990-91 expenditure breakdown: research support, $65,300; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MT-2954*	$ 1,014,897/67-89 65,000/89-90 75,300/90-91
0311	**CHANG, PATRICIA L.-Y.** *Pediatrics, McMaster* Pseudo lysosomal enzyme deficiencies *1990-91 expenditure breakdown: research support, $47,175; equipment, $3,463* **1990-91 EP Jul 90–Mar 91** *MA-11036*	$ 50,638/90-91
0312	**CHANG, THOMAS M.S.** *Physiology, McGill* Laboratory research on artificial cells in blood substitutes for transfusion enzyme therapy, liver support and renal replacement **1990-91 EP Apr 90–Mar 91** *MT-9100*	$ 626,435/85-89 178,580/89-90 178,580/90-91
0313	**CHAPDELAINE, ALCIDE** *Médecine, Montréal* Parathyroid hormone dependent phosphorylation of proteins in kidney **1990-91 EP avr 90–jui 90** *MA-10309*	$ 32,888/88-89 34,000/89-90 8,500/90-91
0314	**CHAPLER, CHRISTOPHER K.** *Physiology, Queen's* Control systems governing the peripheral and whole body circulatory and metabolic responses during anemic hypoxia, hypoxic hypoxia and carboxy hemoglobinemia (CO hypoxia) **1990-91 EP Apr 90–Mar 91** *MT-6586*	$ 388,878/78-89 60,945/89-90 61,537/90-91
0315	**CHAPLIN, DAVID J.** *Pathology, British Columbia* Transient blood flow in tumours: radiobiological effects **1990-91 EP Apr 90–Mar 91** *MT-10512*	$ 54,680/89-90 72,907/90-91
0316	**CHAPLIN, DAVID J.** **DURAND, RALPH E.** **OLIVE, PEGGY L.** *Pathology, British Columbia* Drug resistance in tumors: importance of cell location **1990-91 EP Apr 90–Mar 91** *MA-9603*	$ 217,500/85-89 80,000/89-90 80,000/90-91
0317	**CHAPMAN, C. ELAINE** *Réadaptation, Montréal* Cortical mechanisms underlying active tactile discrimination in the monkey **1990-91 EP avr 90–mar 91** *MA-9576*	$ 132,953/85-89 40,485/89-90 40,485/90-91

N° de liste	Subvention/Bourse	Résumé financier
0318	**CHARBONNEAU, MICHEL** *Médecine du travail et hygiène du milieu, Montréal* Le mécanisme de la porphyrie hépatique induite par l'hexachlorobenzène chez le rat: étude d'un modèle expérimental pour la prédiction du risque chez l'humain **1990-91 EP avr 90–mar 91** *MT-10513*	$ 33,688/89-90 44,917/90-91
0319	**CHARLTON, MILTON P.** *Physiology, Toronto* Excitation-secretion coupling *1990-91 expenditure breakdown: research support, $59,223; equipment, $28,000* **1990-91 EP Apr 90–Dec 90** *MA-7892*	$ 330,512/83-89 69,634/89-90 87,223/90-91
0320	**CHARTRAND, PIERRE** *Microbiologie et immunologie, Montréal* Intégration et excision du ADN dans le génome des cellules de mammifères **1990-91 EP avr 90–mar 91** *MA-7047*	$ 386,117/79-89 79,525/89-90 79,525/90-91
0321	**CHEESEMAN, CHRISTOPHER I.** *Physiology, Alberta* Intestinal and renal lysine transport **1990-91 EP Apr 90–Mar 91** *MT-10168*	$ 38,000/88-89 38,000/89-90 48,322/90-91
0322	**CHEESEMAN, CHRISTOPHER I.** *Physiology, Alberta* Control of intestinal transport **1990-91 EP Apr 90–Mar 91** *MA-9941*	$ 78,531/87-89 45,561/89-90 45,789/90-91
0323	**CHENG, HAZEL** *Anatomy, Toronto* Control of cell renewal in the intestinal epithelium **1990-91 EP Apr 90–Mar 91** *MT-6335*	$ 540,963/78-89 73,072/89-90 76,961/90-91
0324	**CHENG, PEI-TAK** **GRYNPAS, MARC D.** *Pathology, Toronto* Fluoride effects on bone mineralization and demineralization **1990-91 EP Apr 90–Mar 91** *MA-9689*	$ 122,599/86-89 51,252/89-90 51,252/90-91
0325	**CHERIAN, GEORGE M.** *Pathology, Western Ontario* Metal-protein interactions in metal toxicology **1990-91 EP Apr 90–Mar 91** *MT-9528*	$ 138,690/86-89 58,570/89-90 53,407/90-91
0326	**CHERNICK, VICTOR** *Pediatrics and Child Health, Manitoba* Perinatal physiology **1990-91 EP Apr 90–Mar 91** *MT-2208*	$ 1,673,897/66-89 141,831/89-90 143,208/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0327	**CHERTKOW, HOWARD M.** *Neurology and Neurosurgery, McGill* Semantic memory: cognitive studies and diagnostic applications *1990-91 expenditure breakdown: research support, $44,505; equipment, $4,900* **1990-91 EP Apr 90–Mar 91** *MA-10355*	$ 38,775/88-89 40,000/89-90 49,405/90-91
0328	**CHEUNG, DONALD W.** *Pharmacology, Ottawa* Electrophysiological and pharmacological characterization of freshly isolated single vascular muscle cells from normotensive and hypertensive animals *1990-91 expenditure breakdown: research support, $39,895; equipment, $11,000* **1990-91 EP Apr 90–Mar 91** *MT-10178*	$ 51,950/88-89 38,950/89-90 50,895/90-91
0329	**CHEUNG, DONALD W.** *Pharmacology, Ottawa* Atrial natriuretic factor and the peripheral sympathetic nervous system in blood pressure regulation **1990-91 EP Apr 90–Jun 90** *MA-9529*	$ 96,854/85-89 31,672/89-90 7,918/90-91
0330	**CHIASSON, JEAN-LOUIS** *Médecine, Montréal* Carbohydrate metabolism during pregnancy and parturition **1990-91 EP avr 90–mar 91** *MA-9530*	$ 150,435/85-89 50,580/89-90 46,551/90-91
0331	**CHIK, CONSTANCE L.-Y.** *Medicine, Alberta* Ethanol action on neurotransduction mechanisms *1990-91 expenditure breakdown: research support, $29,198; equipment, $2,950* **1990-91 EP Jul 90–Mar 91** *MA-10944*	$ 32,148/90-91
0332	**CHIU, RAY C.J.** *Surgery, McGill* Transformed skeletal muscle for cardiac assist and repair *MA-7863*	$ 333,218/82-89 80,286/89-90 35,320/90-91
0333	**CHOUINARD, GUY** *Psychiatrie, Montréal* **ANNABLE, LAWRENCE** *Psychiatry, McGill* **BEAUCLAIR, LINDA** *Psychiatry, McGill* **YOUNG, SIMON N.** *Psychiatry, McGill* **REMICK, RONALD A.** *Psychiatry, British Columbia* Controlled clinical trial of tryptophan and lecithin in the treatment of manic patients *1990-91 ventilation des dépenses: aide à la recherche, $183,000; appareils, $8,000* **1990-91 EP jlt 90–mar 91** *MT-10880*	$ 191,000/90-91
0334	**CHOUINARD, GUY** *Psychiatrie, Montréal* **SWINSON, RICHARD P.** *Psychiatry, Toronto* **FONTAINE, REJEAN** *Psychiatrie, Montréal* **BEAUCLAIR, LINDA** *Psychiatry, McGill* **MATAS, MANUEL** *Psychiatry, Manitoba* **QUIRK, KEITH C.** *Psychiatry, Dalhousie* **BEAUDRY, PAUL** *Psychiatry, McGill* **JOHNSTON, DAVID G.** *Psychiatry, Calgary* **ANNABLE, LAWRENCE** *Psychiatry, McGill* **MAX, PAUL** *Psychiatry, Western Ontario* A Canadian multicentre clinical trial of clonazepam, imipramine, clonazepam-imipramine combination, and placebo in panic disorder and agoraphobia with panic attacks *1990-91 ventilation des dépenses: aide à la recherche, $264,355; appareils, $20,349* **1990-91 EP avr 90–mar 91** *MA-10210*	$ 225,822/88-89 224,841/89-90 284,704/90-91
0335	**CHOW, ALBERT H.L.** *Pharmaceutical Sciences, British Columbia* Crystal modification of problematic drugs: control of drug release and bioavailability by incorporated additives **1990-91 EP Apr 90–Mar 91** *MA-10514*	$ 30,000/89-90 40,000/90-91
0336	**CHOW, ANTHONY W.** *Medicine, British Columbia* Pathogenesis of staphylococcal toxic shock syndrome *1990-91 expenditure breakdown: research support, $79,621; equipment, $9,112* **1990-91 EP Apr 90–Mar 91** *MT-7630*	$ 407,867/82-89 68,843/89-90 88,733/90-91
0337	**CHOW, DONNA A.** *Immunology, Manitoba* Natural resistance in tumor progression in vitro: natural antibody/tumor interaction **1990-91 EP Apr 90–Mar 91** *MA-9436*	$ 172,984/85-89 53,958/89-90 55,964/90-91
0338	**CHOW, LAWRENCE H.** *Medicine, Western Ontario* Cellular immunity in mouse myocarditis *1990-91 expenditure breakdown: research support, $27,601; equipment, $19,125* **1990-91 EP Jul 90–Mar 91** *MA-10861*	$ 46,726/90-91
0339	**CHOY, PATRICK C.** *Biochemistry and Molecular Biology, Manitoba* Control of phospholipid biosynthesis in mammalian hearts **1990-91 EP Apr 90–Mar 91** *MT-7186*	$ 466,242/79-89 69,724/89-90 75,957/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0340	**CHOY, PATRICK C.** *Biochemistry and Molecular Biology, Manitoba* The metabolism and physiological role of cardiac plasmalogens **1990-91 EP Apr 90–Mar 91** *MA-9164*	$ 123,139/85-89 47,277/89-90 54,306/90-91	0348	**CLANACHAN, ALEXANDER S.** *Pharmacology, Alberta* **FINEGAN, BARRY A.** *Anesthesia, Alberta* Adenosine receptor agonists in treatment of acute heart failure **1990-91 EP Jul 90–Mar 91** *MA-11037*	$ 35,294/90-91
0341	**CHUI, DAVID H.K.** *Pathology, McMaster* Erythroid cell differentiation *1990-91 expenditure breakdown: research support, $123,086; equipment, $14,000* **1990-91 EP Apr 90–Mar 91** *MT-5004*	$ 1,306,811/73-89 120,819/89-90 137,086/90-91	0349	**CLANDININ, M. THOMAS** *Foods and Nutrition, Alberta* Regulation of desaturase activity in the intestinal mucosa in disease states **1990-91 EP Apr 90–Mar 91** *MA-6908*	$ 279,919/81-89 45,846/89-90 47,868/90-91
0342	**CHURCH, JOHN** *Physiology, British Columbia* Modulation of rat hippocampal pyramidal cell function by extra- and intra-cellular pH changes, and by dextromethorphan and sigma receptor ligans *1990-91 expenditure breakdown: research support, $21,795; equipment, $17,360* **1990-91 EP Jul 90–Mar 91** *MA-11044*	$ 39,155/90-91	0350	**CLARK, ALBERT F.** *Biochemistry, Queen's* Control of prostate growth and function *MA-10212*	$ 57,600/88-89 53,000/89-90 37,100/90-91
0343	**CHURCH, JON G.** *Basic Medical Sciences, Memorial University of Newfoundland* Mechanism of epidermal growth factor-mediated growth inhibition in human breast cancer cells **1990-91 EP Jul 90–Mar 91** *MT-10936*	$ 45,000/90-91	0351	**CLARK, DAVID A.** *Medicine, McMaster* Immunoregulatory cell and cytokine determinants of pregnancy success or failure **1990-91 EP Apr 90–Mar 91** *MT6447,-9707*	$ 811,765/78-89 151,255/89-90 141,120/90-91
0344	**CHURG, ANDREW M.** *Pathology, British Columbia* Analysis of lung asbestos content in chrysotile miners and millers **1990-91 EP Apr 90–Mar 91** *MT-6907*	$ 252,271/81-89 35,402/89-90 37,358/90-91	0352	**CLARK-LEWIS, IAN** *Biochemistry, British Columbia* Structure-function of interleukin-3 **1990-91 EP Apr 90–Mar 91** *MA-10517*	$ 43,425/89-90 53,500/90-91
0345	**CHURG, ANDREW M.** **WIGGS, BARRY J.** **WRIGHT, JOANNE L.** *Pathology, British Columbia* An animal model of cigarette smoke and mineral dust exposure **1990-91 EP Apr 90–Mar 91** *MA-8051*	$ 180,180/83-89 60,836/89-90 60,836/90-91	0353	**CLARKE, ANTHONY J.** *Microbiology, Guelph* The role of peptidoglycan O-acetylation in pathogenesis and the isolation and characterization of a peptidoglycan N,O-acetyltransferase *1990-91 expenditure breakdown: research support, $44,126; equipment, $12,731* **1990-91 EP Jul 90–Mar 91** *MT-10954*	$ 56,857/90-91
0346	**CIAMPI, ANTONIO** *Pediatrics, McGill* Classification methods in biostatistics **1990-91 EP Apr 90–Mar 91** *MA-8940*	$ 201,315/84-89 72,894/89-90 70,077/90-91	0354	**CLARKE, HUGH J.** *Obstetrics and Gynecology, McGill* Molecular regulation of meiotic maturation in mammalian oocytes *1990-91 expenditure breakdown: research support, $40,163; equipment, $15,900* **1990-91 EP Jul 90–Mar 91** *MT-10955*	$ 56,063/90-91
0347	**CIRIELLO, JOHN** *Physiology, Western Ontario* Central organization of cardiovascular reflex pathways **1990-91 EP Apr 90–Mar 91** *MT-10195*	$ 89,490/88-89 68,490/89-90 67,599/90-91	0355	**CLARKE, JOE T.R.** *Pediatrics, Toronto* **CALLAHAN, JOHN W.** *Pediatrics, Toronto* **LITTLE, PETER B.** *Veterinary Pathology, Guelph* Studies on the biochemical genetics and treatment of caprine beta-mannosidosis: a model lysosomal storage disease **1990-91 EP Apr 90–Jun 90** *MT-8586*	$ 367,471/84-89 82,997/89-90 20,951/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0356	**CLARKE, MICHAEL W.** *Microbiology and Immunology, Western Ontario* Structure/function relationships of polymorphic membrane proteins *1990-91 expenditure breakdown: research support, $47,900; equipment, $6,000* **1990-91 EP Apr 90–Mar 91** *MT-10213*	$ 54,000/88-89 43,000/89-90 53,900/90-91	0364	**COHEN, AMOS** *Pediatrics, Toronto* Purine metabolism in lymphocyte differentiation **1990-91 EP Apr 90–Mar 91** *MT-7634*	$ 360,178/82-89 71,441/89-90 91,470/90-91
0357	**CLARKE, PAUL B.S.** *Pharmacology and Therapeutics, McGill* Chronic central nicotinic blockade by chlorisondamine **1990-91 EP Apr 90–Mar 91** *MT-10516*	$ 39,034/89-90 52,045/90-91	0365	**COHEN, MONROE W.** *Physiology, McGill* Neuromuscular synaptogenesis **1990-91 EP Apr 90–Mar 91** *MT-3630*	$ 915,257/69-89 73,542/89-90 74,256/90-91
0358	**CLEGHORN, JOHN M.** *Psychiatry, McMaster* **BROWN, GREGORY M.** *Biomedical Sciences, McMaster* **LIST, STEPHEN J.** *Psychiatry, McMaster* **GARNETT, E. STEPHEN** *Radiology, McMaster* Positron emission tomography of the brain in schizophrenia: neuropharmacology **1990-91 EP Apr 90–Mar 91** *MT-10214*	$ 80,000/88-89 80,000/89-90 91,955/90-91	0366	**COHEN, ZANE** *Surgery, Toronto* **WONG, PUI-YUEN** *Clinical Biochemistry, Toronto* **LEVY, GARY A.** *Medicine, Toronto* An intestinal transplantation model to study graft survival and immunological mechanisms of transplant rejection **1990-91 EP Apr 90–Mar 91** *MA-9082*	$ 191,809/85-89 50,760/89-90 50,000/90-91
0359	**CLERMONT, YVES W.** *Anatomy, McGill* Cell biological studies on mammalian testis **1990-91 EP Apr 90–Mar 91** *MT-4677*	$ 1,176,481/72-89 111,169/89-90 104,988/90-91	0367	**COLE, DAVID E.C.** *Pediatrics, Dalhousie* Developmental aspects of inorganic sulfate metabolism *MA-8121*	$ 206,366/84-89 45,176/89-90 19,875/90-91
0360	**COATES, GEOFFREY** **FIRNAU, GUNTER B.** *Radiology, McMaster* Increased blood flow and surface area: effect on uptake of 11C-serotonin by the lung **1990-91 EP Apr 90–Jun 90** *MA-8690*	$ 146,199/84-89 34,029/89-90 8,507/90-91	0368	**COLE, SUSAN P.C.** *Oncology, Queen's* **DEELEY, ROGER G.** *Pathology, Queen's* Molecular basis of drug resistance in a lung carcinoma cell line **1990-91 EP Apr 90–Mar 91** *MT-10519*	$ 58,800/89-90 78,400/90-91
0361	**COCEANI, FLAVIO** *Pediatrics, Toronto* Eicosanoids and neuronal function **1990-91 EP Apr 90–Mar 91** *MT-10518*	$ 49,253/89-90 65,671/90-91	0369	**COLE, WILLIAM C.** *Physiology, Manitoba* Effects of free radicals on electrical properties of cardiac muscle **1990-91 EP Apr 90–Mar 91** *MA-10569*	$ 44,084/89-90 38,112/90-91
0362	**COCKFIELD, SANDRA M.** *Medicine, Alberta* The regulation of interferon-gamma in vivo *1990-91 expenditure breakdown: research support, $57,377; equipment, $10,000* **1990-91 EP Jul 90–Mar 91** *MA-10859*	$ 67,377/90-91	0370	**COLLE, ELEANOR** *Pediatrics, McGill* **FUKS, ABRAHAM** *Medicine, McGill* **GUTTMANN, RONALD D.** *Medicine, McGill* Genetics of spontaneous insulin dependent diabetes mellitus in the rat **1990-91 EP Jul 90–Sep 90** *MT-11076*	$ 20,200/90-91
0363	**CODDING, PENELOPE W.** *Chemistry, Calgary* Molecular modeling and structural analysis of drug-receptor interactions **1990-91 EP Apr 90–Mar 91** *MA-8087*	$ 184,924/83-89 46,260/89-90 47,060/90-91	0371	**COLLIER, BRIAN** *Pharmacology and Therapeutics, McGill* Cholinergic mechanisms **1990-91 EP Apr 90–Mar 91** *MT-2992*	$ 1,403,412/68-89 137,424/89-90 133,187/90-91
			0372	**COLLINS, STEPHEN M.** *Medicine, McMaster* The immunomodulation of gastrointestinal motility **1990-91 EP Apr 90–Mar 91** *MA-10391*	$ 94,109/89-90 87,970/90-91

List No.	Grant/Award	Financial History
0373	**COLLINS, STEPHEN M.** *Medicine, McMaster* **WEINGARTEN, HARVEY P.** *Psychology, McMaster* Intestinal inflammation and feeding behaviour **1990-91 EP Apr 90–Mar 91** *MT-9142*	$ 130,544/85-89 36,771/89-90 50,630/90-91
0374	**COLLU, ROBERT** *Pédiatrie, Montréal* Control of pituitary prolactin secretion **1990-91 EP avr 90–mar 91** *MA-7638*	$ 361,196/82-89 59,738/89-90 60,456/90-91
0375	**COLLU, ROBERT** *Pédiatrie, Montréal* Characterization of D2 dopaminergic receptor **1990-91 EP avr 90–mar 91** *MA-8099*	$ 220,686/83-89 43,744/89-90 43,744/90-91
0376	**COLMERS, WILLIAM F.** *Pharmacology, Alberta* Neuropeptide Y inhibition in rat brain slice **1990-91 EP Apr 90–Mar 91** *MT-10520*	$ 36,210/89-90 48,280/90-91
0377	**CONGOTE, L. FERNANDO** *Medicine, McGill* Hormonal regulation of fetal erythropoiesis *MA-6072*	$ 577,604/77-89 73,857/89-90 60,189/90-91
0378	**CONLY, JOHN M.** *Medicine, Saskatchewan* The role of bacterially synthesized menaquinones in human nutrition *MA-10801*	$ 11,130/90-91
0379	**CONNELLY, PHILIP W.** *Medicine, Toronto* The role of hepatic lipase in lipoprotein metabolism in man **1990-91 EP Apr 90–Mar 91** *MT-9532*	$ 132,500/85-89 50,000/89-90 65,015/90-91
0380	**CONNOLLY, STUART J.** *Medicine, McMaster* **ROBERTS, ROBIN S.** *Clinical Epidemiology and Biostatistics, McMaster* **GENT, MICHAEL** *Clinical Epidemiology and Biostatistics, McMaster* Canadian implantable defibrillator study **1990-91 EP Jul 90–Mar 91** *MA-10823*	$ 272,494/90-91

N° de liste	Subvention/Bourse	Résumé financier
0381	**CONNOLLY, STUART J.** *Medicine, McMaster* **CAIRNS, JOHN A.** *Medicine, McMaster* **GENT, MICHAEL** *Clinical Epidemiology and Biostatistics, McMaster* **ROBERTS, ROBIN S.** *Clinical Epidemiology and Biostatistics, McMaster* **LAUPACIS, ANDREAS** *Medicine, Western Ontario* Canadian atrial fibrillation anticoagulation study **1990-91 EP Apr 90–Aug 90** *MA-9846*	$ 746,900/87-89 418,565/89-90 180,668/90-91
0382	**COOK, MICHAEL A.** *Pharmacology and Toxicology, Western Ontario* Pharmacology of adenosine at the enteric nervous system *1990-91 expenditure breakdown: research support, $44,400; equipment, $9,035* **1990-91 EP Apr 90–Mar 91** *MT-10167*	$ 49,458/88-89 42,000/89-90 53,435/90-91
0383	**COOPER, ELLIS J.** *Physiology, McGill* Development of autonomic sensory neurons in culture **1990-91 EP Apr 90–Mar 91** *MA-7210*	$ 376,556/80-89 58,126/89-90 60,516/90-91
0384	**COOPER, ELLIS J.** *Physiology, McGill* Physiology of nicotinic acetylcholine receptors in the central nervous system *1990-91 expenditure breakdown: research support, $28,186; equipment, $14,173* **1990-91 EP Jul 90–Mar 91** *MT-10910*	$ 42,359/90-91
0385	**COPP, D. HAROLD** *Physiology, British Columbia* Studies on stanniocalcin, a new calcium-regulating hormone from fish **1990-91 EP Apr 90–Mar 91** *MA-9708*	$ 146,109/86-89 50,000/89-90 54,190/90-91
0386	**CORBETT, DALE R.** *Physiology, Memorial University of Newfoundland* Pharmacological prevention of ischemic brain damage *1990-91 expenditure breakdown: research support, $34,750; equipment, $21,000* **1990-91 EP Apr 90–Mar 91** *MA-10196*	$ 37,500/88-89 32,500/89-90 55,750/90-91
0387	**COREN, STANLEY** *Psychology, British Columbia* The prevalence of visual deficits in the general population: measurement and assessment of visual function **1990-91 EP Apr 90–Mar 91** *MA-10521*	$ 25,170/89-90 33,560/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0388	**CORMIER, YVON** *Médecine, Laval* Pathophysiology of extrinsic allergic alveolitis and other farm-related respiratory disorders **1990-91 EP avr 90–mar 91** *MA-7292*	$ 326,026/80-89 56,342/89-90 57,313/90-91
0389	**COSIO, MANUEL G.** *Medicine, McGill* Airway reactivity, lung inflammation and lung destruction in smokers **1990-91 EP Apr 90–Mar 91** *MA-9839*	$ 86,452/87-89 57,462/89-90 48,875/90-91
0390	**COSTERTON, J. WILLIAM** *Biological Sciences, Calgary* Bacterial biofilms: physiology, immunogenicity, and resistance to antibiotics and to host defences **1990-91 EP Apr 90–Mar 91** *MA-9533*	$ 241,850/85-89 75,000/89-90 75,000/90-91
0391	**COTE, AURORE** *Pediatrics, McGill* Cardiorespiratory and metabolic response to hypoxia in newborns *MA-10258*	$ 50,000/88-89 50,000/89-90 35,000/90-91
0392	**COTE, GRAHAM P.** *Biochemistry, Queen's* Regulation of myosin activity by heavy chain kinases **1990-91 EP Apr 90–Mar 91** *MA-8603*	$ 204,283/84-89 46,741/89-90 49,325/90-91
0393	**COTTON, DAVID J.** **GRAHAM, BRIAN L.** *Medicine, Saskatchewan* Gas mixing and diffusion in the lung *1990-91 expenditure breakdown: research support, $38,000; equipment, $7,198* **1990-91 EP Apr 90–Mar 91** *MT-10323*	$ 20,200/88-89 20,200/89-90 45,198/90-91
0394	**COULTER-MACKIE, MARION B.** *Pediatrics, Western Ontario* Molecular analysis of Sanfilippo A syndrome and related disorders *MA-10377*	$ 47,186/88-89 43,600/89-90 22,345/90-91
0395	**COULTON, JAMES W.** *Microbiology and Immunology, McGill* Studies on bacterial cell envelopes *1990-91 expenditure breakdown: research support, $61,011; equipment, $15,617* **1990-91 EP Apr 90–Mar 91** *MT-6911*	$ 312,445/81-89 54,350/89-90 76,628/90-91
0396	**COURNEYA, CAROL-ANN M.** *Physiology, British Columbia* Pressor hormones in hypertension *1990-91 expenditure breakdown: research support, $24,321; equipment, $52,988* **1990-91 EP Jul 90–Mar 91** *MA-11050*	$ 77,309/90-91

N° de liste	Subvention/Bourse	Résumé financier
0397	**COUTTS, RONALD T.** *Pharmacy and Pharmaceutical Sciences, Alberta* **BAKER, GLEN B.** *Psychiatry, Alberta* Importance of chirality and metabolism in drugs acting on serotonin in the central nervous system **1990-91 EP Jul 90–Mar 91** *MA-10915*	$ 34,827/90-91
0398	**COUTURE, REJEAN** *Physiologie, Montréal* Etude du rôle central des neurokinines et kinines dans la régulation cardiovasculaire chez le rat normotendu et hypertendu **1990-91 EP avr 90–mar 91** *MA-8925*	$ 174,728/84-89 37,395/89-90 41,660/90-91
0399	**COX, DIANE W.** *Pediatrics, Toronto* Genetic variation and organization of genes on human chromosome 14 **1990-91 EP Apr 90–Mar 91** *MT-5426*	$ 968,090/75-89 150,244/89-90 140,031/90-91
0400	**COX, TERRY A.** *Ophthalmology, British Columbia* Afferent pupillary defects **1990-91 EP Apr 90–Jun 90** *MA-10161*	$ 38,460/88-89 35,510/89-90 785/90-91
0401	**CRANKSHAW, DENIS J.** *Obstetrics and Gynecology, McMaster* Studies on the mechanisms of parturition: the regulation of myometrial excitability and the mode of action of uterine stimulants **1990-91 EP Apr 90–Mar 91** *MA-9261*	$ 180,872/83-89 59,070/89-90 60,060/90-91
0402	**CRINE, PHILIPPE J.** *Biochimie, Montréal* Biosynthesis, posttranslational modification and targeting of secretory and membrane proteins **1990-91 EP avr 90–mar 91** *MT-6612*	$ 540,253/78-89 43,750/89-90 35,000/90-91
0403	**CROCKER, JOHN F.S.** *Pediatrics, Dalhousie* **OGBORN, MALCOLM R.** *Pediatrics and Child Health, Manitoba* Modulation of experimental polycystic kidney disease by thyroid and steroid hormones **1990-91 EP Apr 90–Mar 91** *MA-10522*	$ 42,647/89-90 56,863/90-91
0404	**CROMLISH, JAMES A.** *Biochemistry, McGill* Mechanism and regulation of mammalian RNA polymerase III transcription initiation *1990-91 expenditure breakdown: research support, $51,000; equipment, $50,000* **1990-91 EP Jul 90–Mar 91** *MT-10897*	$ 101,000/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0405	**CRUESS, ALAN F.** ***Ophthalmology, Queen's*** Argon versus krypton laser photocoagulation treatment for subretinal neovascularization **1990-91 EP Apr 90–Mar 91** *MA-9535*	$ 492,946/86-89 63,950/89-90 101,275/90-91	0413	**CUPPLES, WILLIAM A.** ***Medicine, McGill*** Role of myogenic response in renal autoregulation *1990-91 expenditure breakdown: research support, $25,684; equipment, $39,835* **1990-91 EP Jul 90–Mar 91** *MT-10847*	$ 65,519/90-91
0406	**CRUZ, TONY F.** ***Clinical Biochemistry, Toronto*** **KANDEL, RITA A.** ***Pathology, Toronto*** Regulation of collagenase production by chondrocytes **1990-91 EP Apr 90–Mar 91** *MT-10570*	$ 50,013/89-90 57,350/90-91	0414	**CURRY, KENNETH** ***Pharmaceutical Sciences, British Columbia*** The isolation and characterization of excitatory amino acid receptors **1990-91 EP Apr 90–Mar 91** *MA-10523*	$ 16,475/89-90 13,300/90-91
0407	**CUELLO, A. CLAUDIO G.** ***Pharmacology and Therapeutics, McGill*** Studies on the plasticity of cholinergic neurons in the central nervous system **1990-91 EP Jul 90–Mar 91** *MT-10937*	$ 65,250/90-91	0415	**CYBULSKY, ANDREY V.** ***Medicine, McGill*** Activation of glomerular epithelial cells by complement *1990-91 expenditure breakdown: research support, $55,164; equipment, $3,077* **1990-91 EP Apr 90–Mar 91** *MT-10217*	$ 48,000/88-89 50,000/89-90 58,241/90-91
0408	**CUELLO, A. CLAUDIO G.** ***Pharmacology and Therapeutics, McGill*** Hybrid-hybridomas and radiolabelled monoclonal antibodies *MA-10429*	$ 49,500/88-89 66,000/89-90 28,875/90-91	0416	**CYNADER, MAX S.** ***Ophthalmology, British Columbia*** Neural mechanisms underlying auditory localization **1990-91 EP Apr 90–Mar 91** *MA-9856*	$ 73,900/87-89 34,804/89-90 35,088/90-91
0409	**CULLIS, PIETER R.** ***Biochemistry, British Columbia*** Functional roles of lipids in membranes: modelling the biological membrane **1990-91 EP Apr 90–Mar 91** *MA-6475*	$ 684,939/78-89 127,123/89-90 128,357/90-91	0417	**D'AMOUR, PIERRE** ***Médecine, Montréal*** Circulating parathyroid hormone: nature, origin, signification, consequences **1990-91 EP avr 90–mar 91** *MA-7643*	$ 300,883/82-89 75,364/89-90 84,719/90-91
0410	**CULOTTI, JOSEPH G.** ***Medical Genetics, Toronto*** Molecular biology of nerve guidance genes in C. elegans *1990-91 expenditure breakdown: research support, $70,960; equipment, $4,184* **1990-91 EP Apr 90–Mar 91** *MT-9990*	$ 130,250/87-89 73,130/89-90 75,144/90-91	0418	**D'AMOUR, PIERRE** ***Médecine, Montréal*** **GASCON-BARRE, MARIELLE** ***Pharmacologie, Montréal*** Secondary hyperparathyroidism without renal failure: genesis and involution **1990-91 EP avr 90–mar 91** *MT-10226*	$ 65,000/88-89 65,000/89-90 66,023/90-91
0411	**CUNNINGHAM, ALASTAIR J.** ***Medical Biophysics, Toronto*** Randomized trial of group program teaching coping skills to cancer patients **1990-91 EP Jul 90–Mar 91** *MA-10963*	$ 49,935/90-91	0419	**DAKSHINAMURTI, KRISHNAMURTI** ***Biochemistry and Molecular Biology, Manitoba*** Metabolic control mechanisms: metabolic function of biotin **1990-91 EP Apr 90–Mar 91** *MT-1964*	$ 854,783/65-89 73,000/89-90 73,000/90-91
0412	**CUNNINGHAM, IAN A.** **FENSTER, AARON** ***Diagnostic Radiology and Nuclear Medicine, Western Ontario*** Development of an X-ray microtomography imaging system *1990-91 expenditure breakdown: research support, $18,015; equipment, $15,600* **1990-91 EP Jul 90–Mar 91** *MA-10919*	$ 33,615/90-91	0420	**DAKSHINAMURTI, KRISHNAMURTI** ***Biochemistry and Molecular Biology, Manitoba*** Metabolic function of vitamin B6 *1990-91 expenditure breakdown: research support, 55,029; equipment, $9,992* **1990-91 EP Apr 90–Mar 91** *MT-10227*	$ 50,560/88-89 44,000/89-90 65,021/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0421	**DALES, SAMUEL** ***Microbiology and Immunology, Western Ontario*** Membrane functions and modifications relevant to disease during infections by viruses with potential as vaccine vectors or inducers of demyelination **1990-91 EP Apr 90–Mar 91** *MT-5731*	$ 1,307,481/76-89 137,523/89-90 138,858/90-91
0422	**DANIEL, EDWIN E.** ***Biomedical Sciences, McMaster*** **O'BYRNE, PAUL M.** ***Medicine, McMaster*** Cellular mechanisms of airway responsiveness **1990-91 EP Apr 90–Mar 91** *MA-9699*	$ 169,532/86-89 60,000/89-90 60,000/90-91
0423	**DAVID, SAMUEL** ***Medicine, McGill*** Central nervous system regeneration: studies on neurite outgrowth and glial migration **1990-91 EP Apr 90–Mar 91** *MA-8723*	$ 190,476/84-89 51,043/89-90 51,043/90-91
0424	**DAVIE, JAMES R.** ***Biochemistry and Molecular Biology, Manitoba*** Sequence-specific DNA binding proteins **1990-91 EP Apr 90–Mar 91** *MT-10524*	$ 39,261/89-90 52,348/90-91
0425	**DAVIE, JAMES R.** ***Biochemistry and Molecular Biology, Manitoba*** Chromatin structure and function: role of histone modifications **1990-91 EP Apr 90–Mar 91** *MT-9186*	$ 155,034/85-89 48,328/89-90 52,822/90-91
0426	**DAVIES, PETER L.** ***Biochemistry, Queen's*** Antifreeze proteins: structure, function, regulation, and evolution **1990-91 EP Apr 90–Mar 91** *MT-6199*	$ 690,077/77-89 109,615/89-90 106,385/90-91
0427	**DAVIGNON, JEAN** ***Institut de recherches cliniques de Montréal*** Etude des facteurs pathogéniques impliqués dans les hyperlipidémies, les dyslipoprotéinémies et l'athérosclérose: accent sur les apolipoprotéines **1990-91 EP avr 90–mar 91** *MT-5427*	$ 918,514/75-89 121,370/89-90 115,307/90-91
0428	**DAVIS, PHILIP J.** ***Biochemistry, Memorial University of Newfoundland*** Effects of dietary n-3 polyunsaturated fatty acids on the metabolism of lipoproteins **1990-91 EP Apr 90–Mar 91** *MA-10049*	$ 80,599/87-89 61,867/89-90 40,604/90-91
0429	**DAVISON, JOSEPH S.** ***Medical Physiology, Calgary*** Central nervous control of the gastrointestinal tract **1990-91 EP Apr 90–Mar 91** *MT-7899*	$ 400,022/83-89 90,213/89-90 102,819/90-91

N° de liste	Subvention/Bourse	Résumé financier
0430	**DAWES, COLIN** ***Dentistry, Manitoba*** Studies on saliva and dental plaque **1990-91 EP Apr 90–Mar 91** *MT-3610*	$ 798,918/69-89 73,500/89-90 73,500/90-91
0431	**DE BOLD, ADOLFO J.** ***Pathology, Ottawa*** Studies on atrial natriuretic factor production **1990-91 EP Apr 90–Mar 91** *MT-7645*	$ 331,837/82-89 67,337/89-90 82,999/90-91
0432	**DE CHAMPLAIN, JACQUES** ***Physiologie, Montréal*** Experimental and clinical studies on the modulation of the sympathetic system and its second messengers in the physiological and pathological control of the cardiovascular system **1990-91 EP avr 90–mar 91** *MT-5805*	$ 1,846,051/76-89 203,971/89-90 209,853/90-91
0433	**DE LEAN, ANDRE** ***Pharmacologie, Montréal*** **ONG, HUY** ***Pharmacie, Montréal*** Pharmacological characterization of natriuretic peptides **1990-91 EP jlt 90–sep 90** *MT-10805*	$ 25,125/90-91
0434	**DE MONTIGNY, CLAUDE** ***Psychiatrie, McGill*** Le mécanisme d'action des traitements antidépresseurs *1990-91 ventilation des dépenses: aide à la recherche, $90,635; appareils, $56,994* **1990-91 EP avr 90–mar 91** *MT-6444*	$ 462,319/78-89 63,036/89-90 147,629/90-91
0435	**DE REPENTIGNY, LOUIS** **MONTPLAISIR, SERGE** ***Microbiologie et immunologie, Montréal*** Host-etiologic agent interactions in aspergillosis *MA-10228*	$ 59,500/88-89 46,000/89-90 23,575/90-91
0436	**DEBANNE, MARIA T.** ***Pathology, McMaster*** Studies on the intracellular processing of ligands **1990-91 EP Apr 90–Jun 90** *MA-8704*	$ 206,970/84-89 44,832/89-90 11,208/90-91
0437	**DEBER, CHARLES M.** ***Biochemistry, Toronto*** Synthetic peptide ionophores: membrane interactions of peptides and proteins **1990-91 EP Apr 90–Mar 91** *MT-5810*	$ 696,479/76-89 78,979/89-90 79,746/90-91
0438	**DEELEY, ROGER G.** ***Pathology, Queen's*** Effect of estrogen on gene expression in liver *1990-91 expenditure breakdown: research support, $144,011; equipment, $3,890* **1990-91 EP Apr 90–Mar 91** *MT-7646*	$ 829,000/82-89 134,214/89-90 147,901/90-91

List No.	Grant/Award	Financial History
0439	**DEKABAN, GREGORY A.** ***Microbiology and Immunology, Western Ontario*** The development and understanding of immune responses to HTLV-I **1990-91 EP Apr 90–Mar 91** *MA-10525*	$ 54,500/89-90 59,900/90-91
0440	**DELANGE, A.M. LUKE** ***Human Genetics, Manitoba*** Genetic control of DNA replication and recombination of vaccinia virus **1990-91 EP Apr 90–Mar 91** *MA-9960*	$ 98,422/87-89 61,589/89-90 57,561/90-91
0441	**DELBAERE, LOUIS T.J.** ***Biochemistry, Saskatchewan*** Structural basis of molecular recognition by proteins **1990-91 EP Apr 90–Mar 91** *MT-10162*	$ 89,526/88-89 86,526/89-90 90,266/90-91
0442	**DELESPESSE, GUY J.T.** **SARFATI, MARIE** ***Médecine, Montréal*** Regulation of human IgE synthesis **1990-91 EP avr 90–mar 91** *MA-10397*	$ 128,067/89-90 170,000/90-91
0443	**DELOVITCH, TERRY L.** ***Banting and Best Department of Medical Research, Toronto*** Expression of human HLA class I genes **1990-91 EP Apr 90–Mar 91** *MA-9562*	$ 182,050/85-89 65,000/89-90 65,000/90-91
0444	**DELOVITCH, TERRY L.** ***Banting and Best Department of Medical Research, Toronto*** Influence of antigen processing on immune responsiveness **1990-91 EP Apr 90–Mar 91** *MT-5729*	$ 1,248,936/75-89 136,578/89-90 118,589/90-91
0445	**DENBURG, JUDAH A.** ***Medicine, McMaster*** Cellular and subcellular regulation of basophil, mast cell and eosinophil production **1990-91 EP Apr 90–Mar 91** *MT-7055*	$ 445,458/79-89 50,429/89-90 50,918/90-91
0446	**DENNIS, JAMES W.** ***Medical Genetics, Toronto*** Swainsonine, an antimetastatic and antiproliferative agent **1990-91 EP Apr 90–Mar 91** *MA-10230*	$ 50,000/88-89 50,000/89-90 50,000/90-91
0447	**DENNIS, MICHAEL J.** ***Pharmacologie, Montréal*** Molecular analysis of signal transduction by the muscarinic acetylcholine receptor **1990-91 EP avr 90–mar 91** *MA-10050*	$ 89,533/87-89 39,100/89-90 37,500/90-91
0448	**DENNIS, PATRICK P.** ***Biochemistry, British Columbia*** Molecular evolution: gene organization and regulation, protein structure and function **1990-91 EP Apr 90–Mar 91** *MT-6340*	$ 754,541/78-89 119,000/89-90 119,000/90-91
0449	**DENNIS, TREVOR** ***Psychiatry, McGill*** Investigation of the involvement of GABA-beta receptors in the mediation of the effects of antidepressant treatments *1990-91 expenditure breakdown: research support, $33,133; equipment, $30,000* **1990-91 EP Jul 90–Mar 91** *MT-11025*	$ 63,133/90-91
0450	**DES ROSIERS, CHRISTINE** ***Nutrition, Montréal*** Production and metabolic effects of aldehydes in the heart *1990-91 ventilation des dépenses: aide à la recherche, $43,759; appareils, $6,600* **1990-91 EP jlt 90–mar 91** *MT-10920*	$ 50,359/90-91
0451	**DESAUTELS, MICHEL** ***Physiology, Saskatchewan*** Thermogenic mitochondria and cellular physiology of brown adipose tissue *1990-91 expenditure breakdown: research support, $52,465; equipment, $8,000* **1990-91 EP Apr 90–Mar 91** *MT-7903*	$ 210,882/83-89 42,024/89-90 60,465/90-91
0452	**DESCARRIES, LAURENT** ***Physiologie, Montréal*** Morphologie fonctionnelle des neurones monoaminergiques centraux: plasticité dans le système nerveux central **1990-91 EP avr 90–mar 91** *MT-3544*	$ 1,473,634/69-89 172,682/89-90 172,682/90-91
0453	**DESCHENES, MARTIN** ***Physiologie, Laval*** Etude de la voie corticothalamique chez le rat *1990-91 ventilation des dépenses: aide à la recherche, $58,539; appareils, $11,377* **1990-91 EP avr 90–mar 91** *MT-5877*	$ 497,293/76-89 52,910/89-90 69,916/90-91
0454	**DESGROSEILLERS, LUC** ***Biochimie, Montréal*** La neurobiologie d'Aplysia californica *MA-10231*	$ 70,100/88-89 27,555/89-90 12,243/90-91
0455	**DESILETS, MICHEL** ***Physiology, Ottawa*** Intracellular Na+ regulation in isolated cardiac myocytes **1990-91 EP Apr 90–Mar 91** *MA-9690*	$ 228,295/86-89 52,783/89-90 52,783/90-91
0456	**DESLAURIERS, NOELLA** ***Biochimie, Laval*** Inflammation and immunity in the oral mucosa **1990-91 EP avr 90–mar 91** *MT-8934*	$ 199,826/84-89 60,898/89-90 65,607/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0457	**DEVINE, DANA V.** *Pathology, British Columbia* Complement receptor of human platelets **1990-91 EP Jul 90–Mar 91** *MT-10933*	$ 46,407/90-91
0458	**DEVINE, DANA V.** *Pathology, British Columbia* **CULLIS, PIETER R.** *Biochemistry, British Columbia* Liposome-complement interactions **1990-91 EP Jul 90–Mar 91** *MT-10869*	$ 33,750/90-91
0459	**DHALLA, NARANJAN S.** *Physiology, Manitoba* Studies on heart sarcolemmal membrane function in health and disease **1990-91 EP Apr 90–Mar 91** *MT-3394*	$ 1,072,607/69-89 91,161/89-90 91,161/90-91
0460	**DI PAOLO, THERESE M.P.L.** *Pharmacie, Laval* Hormonal modulation of dopamine systems *1990-91 ventilation des dépenses: aide à la recherche, $47,651; appareils, $17,815* **1990-91 EP avr 90–mar 91** *MT-7651*	$ 267,796/82-89 43,073/89-90 65,466/90-91
0461	**DIAMANT, NICHOLAS E.** *Medicine, Toronto* Control of gastrointestinal tract muscle function in health and disease **1990-91 EP Apr 90–Mar 91** *MA-3353*	$ 1,445,561/68-89 136,578/89-90 137,904/90-91
0462	**DIAMOND, JACK** *Biomedical Sciences, McMaster* Nerve growth factor and plasticity in the adult nervous system **1990-91 EP Apr 90–Mar 91** *MT-6410*	$ 708,900/78-89 128,776/89-90 101,374/90-91
0463	**DICK, JOHN E.** *Medical Genetics, Toronto* Gene transfer into human hematopoietic stem cells with retrovirus vectors **1990-91 EP Apr 90–Mar 91** *MA-9943*	$ 120,700/87-89 82,453/89-90 95,961/90-91
0464	**DICKSON, D. HOWARD** *Anatomy, Dalhousie* Ultrastructure and function of vertebrate retina and pineal **1990-91 EP Apr 90–Mar 91** *MT-5039*	$ 599,730/73-89 72,953/89-90 65,335/90-91
0465	**DICOSMO, FRANK** *Botany, Toronto* **NEUMANN, A. WILHELM** *Mechanical Engineering, Toronto* Production and isolation of clinically important plant-cell produced drugs **1990-91 EP Apr 90–Mar 91** *MA-9857*	$ 118,735/87-89 48,654/89-90 51,340/90-91
0466	**DIEWERT, VIRGINIA M.** *Dentistry, British Columbia* Craniofacial growth during palate development **1990-91 EP Apr 90–Mar 91** *MT-4543*	$ 882,259/71-89 124,187/89-90 111,129/90-91
0467	**DIKSIC, MIRKO** *Neurology and Neurosurgery, McGill* **SOURKES, THEODORE L.** *Psychiatry, McGill* **YAMAMOTO, Y. LUCAS** *Neurology and Neurosurgery, McGill* Measurement of the rate of serotonin synthesis *1990-91 expenditure breakdown: research support, $55,445; equipment, $8,322* **1990-91 EP Apr 90–Mar 91** *MA-10232*	$ 55,440/88-89 55,440/89-90 63,767/90-91
0468	**DIMMOCK, JONATHAN R.** *Pharmacy, Saskatchewan* Design of anticancer agents being principally conjugated styryl ketones and related Mannich bases *1990-91 expenditure breakdown: research support, $39,223; equipment, $5,200* **1990-91 EP Apr 90–Mar 91** *MT-5538*	$ 334,931/74-89 36,132/89-90 44,423/90-91
0469	**DIMOCK, KENNETH D.** *Microbiology and Immunology, Ottawa* Human parainfluenza virus gene expression **1990-91 EP Apr 90–Mar 91** *MA-8688*	$ 149,596/84-89 47,550/89-90 47,550/90-91
0470	**DINDA, PARITOSH K.** **BECK, IVAN T.** *Medicine, Queen's* Studies on the mechanism of intestinal transport of glucose, electrolytes and water **1990-91 EP Apr 90–Mar 91** *MT-4257*	$ 950,588/71-89 97,000/89-90 97,000/90-91
0471	**DITTO, W. BLAINE, JR.** *Psychology, McGill* Genetic influences on autonomic responsivity to stress: mechanisms and implications **1990-91 EP Apr 90–Mar 91** *MA-9224*	$ 54,700/85-89 19,328/89-90 19,749/90-91
0472	**DIXON, GORDON H.** *Medical Biochemistry, Calgary* Structure, organization and regulation of expression of genes during spermatogenesis **1990-91 EP Apr 90–Mar 91** *MT-6078*	$ 2,013,630/77-89 184,250/89-90 184,000/90-91
0473	**DIXON, S. JEFFREY** *Dentistry, Western Ontario* Ion transport in bone cells **1990-91 EP Jul 90–Mar 91** *MT-10854*	$ 59,336/90-91
0474	**DIXON, S. JEFFREY** *Dentistry, Western Ontario* Proton and ascorbate transport in bone cells **1990-91 EP Apr 90–Jun 90** *MA-10403*	$ 33,601/89-90 11,867/90-91

List No.	Grant/Award	Financial History
0475	**DOILLON, CHARLES J.** *Chirurgie, Laval* In vitro reconstruction of connective tissues as substrata for epidermal cells **1990-91 EP avr 90–mar 91** *MT-10571*	$ 75,524/89-90 60,698/90-91
0476	**DOLOVICH, JERRY** *Pediatrics, McMaster* **DENBURG, JUDAH A.** *Medicine, McMaster* Basophil, mast cell and eosinophil growth and differentiation in allergic respiratory diseases **1990-91 EP Apr 90–Mar 91** *MA-8594*	$ 323,952/84-89 56,050/89-90 56,594/90-91
0477	**DOLPHIN, PETER J.** *Biochemistry, Dalhousie* Human plasma lecithin-cholesterol acyltransferase: structure as a determinant of function **1990-91 EP Apr 90–Mar 91** *MT-5999*	$ 481,418/77-89 79,181/89-90 88,115/90-91
0478	**DOOLITTLE, W. FORD** *Biochemistry, Dalhousie* Evolution of genome structure and function **1990-91 EP Apr 90–Mar 91** *MT-4467*	$ 1,431,663/71-89 203,989/89-90 205,970/90-91
0479	**DOROVINI-ZIS, KATERINA** *Pathology, British Columbia* Biology and immunopathology of the cerebral endothelium **1990-91 EP Apr 90–Mar 91** *MA-9823*	$ 86,697/87-89 42,230/89-90 43,567/90-91
0480	**DORRINGTON, JENNIFER H.** *Banting and Best Department of Medical Research, Toronto* Hormonal control of ovarian follicular development **1990-91 EP Apr 90–Mar 91** *MT-5772*	$ 583,095/76-89 88,906/89-90 85,491/90-91
0481	**DOSCH, HANS-MICHAEL** *Pediatrics, Toronto* Development and regulation of human immune responsiveness **1990-91 EP Apr 90–Mar 91** *MA-9484*	$ 222,828/86-89 102,168/89-90 116,015/90-91
0482	**DOSTROVSKY, JONATHAN O.** *Physiology, Toronto* Transmission of nociceptive information to supraspinal levels *1990-91 expenditure breakdown: research support, $73,894; equipment, $7,789* **1990-91 EP Apr 90–Mar 91** *MT-7904*	$ 309,474/83-89 56,627/89-90 81,683/90-91
0483	**DOUCET, GUY** *Physiologie, Montréal* Transplantation neuronale et plasticité anatomique dans le système nerveux central du mammifère adulte *1990-91 ventilation des dépenses: aide à la recherche, $37,104; appareils, $30,387* **1990-91 EP jit 90–mar 91** *MT-10982*	$ 67,491/90-91
0484	**DOUCETTE, J. RONALD** *Anatomy, Saskatchewan* Axonal growth in the primary olfactory system **1990-91 EP Apr 90–Mar 91** *MT-10171*	$ 39,657/88-89 39,297/89-90 41,570/90-91
0485	**DOUGLAS, ROBERT M.** *Ophthalmology, British Columbia* Long-term potentiation *MA-9586*	$ 116,151/85-89 33,225/89-90 14,537/90-91
0486	**DOUGLAS, VIRGINIA I.** *Psychology, McGill* **BARR, RONALD G.** *Pediatrics, McGill* Stimulant medication, training and reinforcement effects in attention deficit hyperactivity disorder **1990-91 EP Apr 90–Mar 91** *MA-10235*	$ 43,000/88-89 43,000/89-90 30,100/90-91
0487	**DOWNEY, GREGORY P.** *Medicine, Toronto* Pulmonary sequestration of neutrophils in adult respiratory distress syndrome: cell deformability and the cytoskeleton *1990-91 expenditure breakdown: research support: $39,737; equipment, $12,689* **1990-91 EP Jul 90–Mar 91** *MT-10994*	$ 52,426/90-91
0488	**DOWNIE, JOHN W.** *Pharmacology, Dalhousie* Modulation of viscerosomatic convergence on sacral spinal neurons concerned with bladder and sphincter control **1990-91 EP Apr 90–Mar 91** *MT-10527*	$ 47,686/89-90 31,720/90-91
0489	**DOWNIE, JOHN W.** *Pharmacology, Dalhousie* **AWAD, SAID A.** *Urology, Dalhousie* **SCHWARZ, ROBERT D.** *Urology, Dalhousie* **GAJEWSKI, JERZY B.** *Urology, Dalhousie* Physiology and pharmacology of lower urinary tract function and dysfunction **1990-91 EP Apr 90–Mar 91** *MT-8792*	$ 362,087/84-89 66,720/89-90 66,720/90-91
0490	**DOYLE, JOHN J.** **ZIPURSKY, ALVIN** *Pediatrics, Toronto* Vitamin C supplementation and hemolytic disease in premature newborns **1990-91 EP Jul 90–Mar 91** *MA-11022*	$ 48,850/90-91
0491	**DRANCE, STEPHEN M.** *Ophthalmology, British Columbia* Susceptibility of the eye to elevated intraocular pressure; the effect of pressure reduction on visual function; study of homeostatic mechanism of visual function in relation to intraocular pressure **1990-91 EP Apr 90–Mar 91** *MT-1578*	$ 715,385/64-89 47,472/89-90 53,889/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0492	**DRAPEAU, GABRIEL R.** *Microbiologie et immunologie, Montréal* La régulation de la division cellulaire chez Escherichia coli **1990-91 EP avr 90–mar 91** *MA-2559*	$ 717,820/67-89 61,140/89-90 57,721/90-91
0493	**DRAPEAU, PIERRE** *Neurology and Neurosurgery, McGill* Function and formation of synapses between identified leech neurons *1990-91 expenditure breakdown: research support, $45,083; equipment, $7,496* **1990-91 EP Apr 90–Mar 91** *MT-10236*	$ 44,166/88-89 37,280/89-90 52,579/90-91
0494	**DREW, TREVOR B.** *Physiologie, Montréal* The role of the motor cortex in the control of gait **1990-91 EP avr 90–mar 91** *MA-9578*	$ 150,322/85-89 57,052/89-90 57,052/90-91
0495	**DROUIN, JACQUES** **NEMER, MONA** *Institut de recherches cliniques de Montréal* Regulation of pro-natriodilatin gene expression **1990-91 EP avr 90–sep 90** *MA-9281*	$ 224,874/85-89 80,005/89-90 40,391/90-91
0496	**DROUIN, JACQUES** *Institut de recherches cliniques de Montréal* Hormonal control of pro-opiomelanocortin gene expression **1990-91 EP avr 90–mar 91** *MT-6749*	$ 429,235/81-89 92,000/89-90 92,000/90-91
0497	**DRUCKER, DANIEL J.** *Medicine, Toronto* Glucagon gene expression **1990-91 EP Jul 90–Mar 91** *MT-10903*	$ 65,475/90-91
0498	**DRUCKER, DANIEL J.** *Medicine, Toronto* Glucagon gene expression **1990-91 EP Apr 90–Jun 90** *MA-10078*	$ 85,225/87-89 41,395/89-90 9,740/90-91
0499	**DU SOUICH, PATRICK P.** **CAILLE, GILLES** *Pharmacologie, Montréal* Role of the lung and the gastrointestinal tract in the first-pass effect of drugs *1990-91 ventilation des dépenses: aide à la recherche, $40,843; appareils, $2,226* **1990-91 EP jlt 90–mar 91** *MA-10874*	$ 43,069/90-91
0500	**DU SOUICH, PATRICK P.** *Pharmacologie, Montréal* Effect of hypoxia and inflammation on drug kinetics *1990-91 ventilation des dépenses: aide à la recherche, $58,341; appareils, $14,018* **1990-91 EP avr 90–mar 91** *MT-7834*	$ 293,408/82-89 53,581/89-90 72,359/90-91

N° de liste	Subvention/Bourse	Résumé financier
0501	**DUBE, IAN D.** *Pathology, Toronto* **KRUTH, STEPHEN A.** *Clinical Studies, Guelph* **VALLI, VICTOR E.O.** *Veterinary Pathology, Guelph* Canine model for autologous bone marrow transplantation of long term bone marrow culture cells **1990-91 EP Apr 90–Mar 91** *MT-10259*	$ 55,000/88-89 55,000/89-90 70,075/90-91
0502	**DUBE, IAN D.** *Pathology, Toronto* Cloning and characterization of the oncogene involved in the 10;14 translocation of the T-cell neoplasia **1990-91 EP Apr 90–Mar 91** *MT-10528*	$ 42,767/89-90 57,022/90-91
0503	**DUBOW, MICHAEL S.** *Microbiology and Immunology, McGill* Studies on bacterial viruses Mu and D108 *1990-91 expenditure breakdown: research support, $89,262; equipment, $5,000* **1990-91 EP Apr 90–Mar 91** *MT-6751*	$ 468,318/81-89 72,712/89-90 94,262/90-91
0504	**DUBUC, REJEAN** *Kinanthropologie, Québec à Montréal* The role of reticulospinal neurones in the control of locomotion in the lamprey **1990-91 EP avr 90–mar 91** *MT-10703*	$ 57,342/89-90 37,416/90-91
0505	**DUFFIN, JAMES** *Physiology, Toronto* Functional relations among respiratory neurones *1990-91 expenditure breakdown: research support, $41,913; equipment, $22,333* **1990-91 EP Apr 90–Mar 91** *MT-7842*	$ 239,836/82-89 47,277/89-90 64,246/90-91
0506	**DUMAS, JEAN E.** *Psycho-éducation, Montréal* How do mothers under stress attend to their children? **1990-91 EP avr 90–mar 91** *MT-9607*	$ 122,565/85-89 40,199/89-90 41,045/90-91
0507	**DUNCAN, ALESSANDRA M.V.** **BRIDGE, PETER J.** *Pathology, Queen's* Cytogenetic and molecular characterization of chromosomal rearrangements *MA-9683*	$ 141,510/86-89 53,000/89-90 27,163/90-91
0508	**DUNCAN, GARY H.** **LAVIGNE, GILLES** **BUSHNELL, M. CATHERINE** *Médecine dentaire, Montréal* Psychophysical studies of pain perception **1990-91 EP avr 90–mar 91** *MT-9773*	$ 44,495/87-89 36,798/89-90 43,595/90-91

List No.	Grant/Award	Financial History
0509	**DUNCAN, GARY H.** *Médecine dentaire, Montréal* **BUSHNELL, M. CATHERINE** *Médecine dentaire, Montréal* **MOLINA-NEGRO, PEDRO** *Chirurgie, Montréal* Effects of intracranial stimulation on pain perception in man and monkey *1990-91 ventilation des dépenses: aide à la recherche, $45,921; appareils, $5,075* **1990-91 EP avr 90–mar 91** *MA-10260*	$ 63,048/88-89 51,298/89-90 50,996/90-91
0510	**DUNCAN-HEWITT, WENDY C.** *Pharmacy, Toronto* Predicting tablet strength from the properties of tablet constituents *1990-91 expenditure breakdown: research support, $29,535; equipment, $870* **1990-91 EP Jul 90–Mar 91** *MA-10935*	$ 30,405/90-91
0511	**DUNN, ROBERT J.** *Neurology and Neurosurgery, McGill* The molecular biology of the sodium channel **1990-91 EP Apr 90–Mar 91** *MT-7905*	$ 299,460/83-89 69,000/89-90 69,000/90-91
0512	**DUNN, ROBERT J.** *Neurology and Neurosurgery, McGill* Myelin formation: studies on the role of myelin-associated glycoprotein **1990-91 EP Jul 90–Mar 91** *MT-10800*	$ 48,540/90-91
0513	**DUNN, STANLEY D.** *Biochemistry, Western Ontario* Structure, function and synthesis **1990-91 EP Apr 90–Mar 91** *MT-10237*	$ 60,000/88-89 60,000/89-90 70,500/90-91
0514	**DUPRE, JOHN** **BEHME, MARGARET T.** **HRAMIAK, IRENE M.** *Medicine, Western Ontario* Regulatory functions of the intestine in metabolism of nutrients **1990-91 EP Apr 90–Mar 91** *MT-2119*	$ 1,381,614/66-89 78,000/89-90 78,600/90-91
0515	**DURAND, LOUIS-GILLES** *Médecine, Montréal* **LANGLOIS, YVES E.** *Chirurgie, Montréal* **LANTHIER, THERESE** *Médecine vétérinaire, Montréal* Effects of calcification and thrombosis on bioprosthetic closure sound spectra: experimental evaluation in dogs and sheep **1990-91 EP jlt 90–mar 91** *MA-10929*	$ 64,171/90-91
0516	**DURAND, RALPH E.** *Pathology, British Columbia* Selection of cancer chemotherapy combinations to overcome drug resistance *1990-91 expenditure breakdown: research support, $37,601; equipment, $7,600* **1990-91 EP Apr 90–Mar 91** *MT-10238*	$ 90,000/88-89 90,000/89-90 95,201/90-91
0517	**DURIE, PETER R.** *Pediatrics, Toronto* Pancreatic diseases in infancy and childhood **1990-91 EP Apr 90–Mar 91** *MT-6752*	$ 289,855/81-89 50,000/89-90 50,000/90-91
0518	**DUSSAULT, JEAN H.** **PUYMIRAT, JACK** *Médecine, Laval* Mechanism of action of thyroid hormones on the central nervous system **1990-91 EP jlt 90–mar 91** *MT-11082*	$ 77,250/90-91
0519	**DYKES, ROBERT W.** *Physiologie, Montréal* Reorganization of somatosensory cortex: modification of receptive field size and location **1990-91 EP avr 90–mar 91** *MA-8700*	$ 258,333/84-89 83,142/89-90 70,823/90-91
0520	**EASTON, PAUL A.** *Medicine, Calgary* Respiratory muscle function and coordination in the intact canine **1990-91 EP Apr 90–Mar 91** *MT-10543*	$ 37,500/89-90 50,000/90-91
0521	**EAVES, CONNIE J.** *Medical Genetics, British Columbia* Regulation of normal and malignant B-lineage cells **1990-91 EP Apr 90–Mar 91** *MT-10544*	$ 57,000/89-90 76,000/90-91
0522	**EBISUZAKI, KANEY** *Microbiology and Immunology, Western Ontario* Developmental program of murine erythroleukemia (Friend) cells *MA-10239*	$ 70,000/88-89 70,000/89-90 35,875/90-91
0523	**EDDY, ALLISON A.** *Pediatrics, Toronto* The relationship between proteinuria and interstitial immunopathology in renal disease **1990-91 EP Apr 90–Mar 91** *MA-9720*	$ 162,468/86-89 53,798/89-90 53,798/90-91
0524	**EDELSON, JEFFREY D.** *Medicine, Toronto* Acute lung injury: mechanisms of epithelial dysfunction **1990-91 EP Apr 90–Mar 91** *MT-10545*	$ 37,500/89-90 50,000/90-91
0525	**EDWARDS, DYLAN R.W.** *Pharmacology and Therapeutics, Calgary* Transcriptional regulation of collagenase and tissue inhibitor of metalloproteinases by growth factors **1990-91 EP Apr 90–Mar 91** *MT-10572*	$ 57,250/89-90 63,000/90-91
0526	**EDWARDS, DYLAN R.W.** *Pharmacology and Therapeutics, Calgary* Role of tissue inhibitor of metalloproteinases in invasion and metastasis **1990-91 EP Jul 90–Mar 91** *MA-11046*	$ 35,813/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0527	**EIZENMAN, MOSHE** *Biomedical Engineering, Toronto* **TROPE, GRAHAM E.** *Ophthalmology, Toronto* Eye movement visual fields *MA-10240*	$ 82,369/88-89 67,287/89-90 47,100/90-91
0528	**EIZENMAN, MOSHE** *Biomedical Engineering, Toronto* **MCCULLOCH, DAPHNE** *Ophthalmology, Toronto* **MORIN, J. DONALD** *Ophthalmology, Toronto* Development of binocular vision in infants *1990-91 expenditure breakdown: research support, $40,506; equipment, $2,000* **1990-91 EP Apr 90–Mar 91** *MT-9624*	$ 92,368/85-89 33,991/89-90 42,506/90-91
0529	**ELCE, JOHN S.** *Biochemistry, Queen's* Calpain: physiological functions and regulation *MA-8883*	$ 263,424/84-89 59,541/89-90 48,377/90-91
0530	**ELINSON, RICHARD P.** *Zoology, Toronto* A microtubule-based motor important in development **1990-91 EP Apr 90–Jun 90** *MA-10188*	$ 46,142/88-89 39,000/89-90 9,750/90-91
0531	**ELLEN, RICHARD P.** *Dentistry, Toronto* Attachment and the intraoral ecology of periodontal pathogens **1990-91 EP Apr 90–Mar 91** *MT-5619*	$ 783,148/75-89 110,805/89-90 111,129/90-91
0532	**ELLIOTT, BRUCE E.** *Pathology, Queen's* Studies of host antitumor immunity in a mammary carcinoma model: tissue site and tumor stage effects *1990-91 expenditure breakdown: research support, $62,346; equipment, $3,750* **1990-91 EP Apr 90–Mar 91** *MA-7059*	$ 450,800/79-89 56,732/89-90 66,096/90-91
0533	**ELLIOTT, JOHN F.** *Medical Microbiology and Infectious Diseases, Alberta* Eucaryotic expression cloning and characterization of malaria surface antigens **1990-91 EP Jul 90–Mar 91** *MT-10828*	$ 56,126/90-91
0534	**ELLISON, MICHAEL J.** *Biochemistry, Alberta* The function of ubiquitin in DNA repair and cell cycle control *1990-91 expenditure breakdown: research support, $43,500; equipment, $23,443* **1990-91 EP Jul 90–Mar 91** *MT-11010*	$ 66,943/90-91
0535	**ELSHOLTZ, HARRY P.** *Clinical Biochemistry, Toronto* Hormonal and developmental gene regulation in the pituitary **1990-91 EP Apr 90–Mar 91** *MT-10546*	$ 65,000/89-90 60,000/90-91
0536	**ENDRENYI, LASZLO** *Pharmacology, Toronto* Optimal and robust approaches to designing pharmacokinetic and pharmacodynamic investigations *MA-8948*	$ 183,362/84-89 44,504/89-90 23,025/90-91
0537	**EPAND, RICHARD M.** *Biochemistry, McMaster* Functional properties of membranes and alterations in their bulk biophysical properties **1990-91 EP Apr 90–Mar 91** *MT-7654*	$ 380,673/82-89 76,694/89-90 94,368/90-91
0538	**ERNST, PETER B.** *Pathology, McMaster* Intestinal immune regulation **1990-91 EP Apr 90–Mar 91** *MA-9961*	$ 78,750/87-89 46,500/89-90 47,000/90-91
0539	**ESCHER, EMANUEL** *Pharmacologie, Sherbrooke* Le développement d'outils de recherche pour les récepteurs des neurokinines et d'autres peptides bioactifs **1990-91 EP avr 90–mar 91** *MT-7242*	$ 459,068/80-89 79,659/89-90 75,969/90-91
0540	**ETHIER, C. ROSS** *Mechanical Engineering, Toronto* Influence of inner wall of Schlemm's canal on aqueous outflow resistance **1990-91 EP Apr 90–Mar 91** *MA-10051*	$ 57,156/87-89 39,000/89-90 42,000/90-91
0541	**EVANS, DAVID H.** *Molecular Biology and Genetics, Guelph* Biochemical and genetic studies of the mechanism of poxviral recombination *1990-91 expenditure breakdown: research support, $45,000; equipment, $2,000* **1990-91 EP Jul 90–Mar 91** *MT-10923*	$ 47,000/90-91
0542	**EVANS, EVAN A.** *Pathology, British Columbia* Lipid bilayer mechanics, surface recognition and adhesion **1990-91 EP Apr 90–Mar 91** *MT-7477*	$ 535,082/81-89 82,995/89-90 83,308/90-91
0543	**EVANS, JANE A.** *Human Genetics, Manitoba* Numerical taxonomy in the study of birth defects **1990-91 EP Apr 90–Mar 91** *MA-9824*	$ 75,170/87-89 43,976/89-90 37,675/90-91

List No.	Grant/Award	Financial History
0544	**EVERED, MARK D.** *Physiology, Saskatchewan* Physiological controls of thirst and salt appetite *1990-91 expenditure breakdown: research support, $35,039; equipment, $7,500* **1990-91 EP Apr 90–Mar 91** *MT-6081*	$ 301,353/77-89 31,518/89-90 42,539/90-91
0545	**FAIMAN, CHARLES** *Medicine, Manitoba* **THLIVERIS, JAMES A.** *Anatomy, Manitoba* **MATWIJIW, IGOR** *Medicine, Manitoba* Gonadotropin regulation in the fetus **1990-91 EP Apr 90–Mar 91** *MA-10547*	$ 40,500/89-90 54,000/90-91
0546	**FALARDEAU, PIERRE** *Médecine, Montréal* Polyunsaturated fatty acids, diacylglycerols and hypertension **1990-91 EP avr 90–mar 91** *MT-10335*	$ 59,849/88-89 58,999/89-90 59,684/90-91
0547	**FAMIGLIETTI, EDWARD V.** *Anatomy, Calgary* Functional architecture of ganglion cells in vertebrate retina *MA-10241*	$ 52,200/88-89 46,900/89-90 32,830/90-91
0548	**FANTUS, I. GEORGE** *Medicine, McGill* Insulin action in health and disease *1990-91 expenditure breakdown: research support, $62,780; equipment, $3,280* **1990-91 EP Apr 90–Mar 91** *MT-7658*	$ 351,916/82-89 60,000/89-90 66,060/90-91
0549	**FARBER, EMMANUEL** *Pathology, Toronto* A model for the sequential analysis of chemical carcinogenesis **1990-91 EP Apr 90–Mar 91** *MT-5994*	$ 775,698/77-89 98,030/89-90 103,296/90-91
0550	**FAROOKHI, RIAZ** *Physiology, McGill* Ovarian follicular development *1990-91 expenditure breakdown: research support, $42,707; equipment, $690* **1990-91 EP Jul 90–Mar 91** *MT-11026*	$ 43,397/90-91
0551	**FAULKNER, PETER** *Microbiology and Immunology, Queen's* Molecular aspects of baculovirus pathogenesis **1990-91 EP Jul 90–Mar 91** *MT-10881*	$ 67,500/90-91
0552	**FAULKNER, PETER** *Microbiology and Immunology, Queen's* Molecular genetics of baculoviruses **1990-91 EP Apr 90–Jun 90** *MT-1978*	$ 1,400,075/66-89 98,161/89-90 23,097/90-91
0553	**FAURE, NACIA** **LEMAY, ANDRE** *Obstétrique et gynécologie, Laval* Etude de la bioactivité de la FSH dans le syndrome des ovaires polykystiques *MA-8588*	$ 237,563/84-89 60,880/89-90 42,616/90-91
0554	**FAUST, EMANUEL A.** *Biochemistry, Dalhousie* The rep protein of minute virus of mice **1990-91 EP Apr 90–Mar 91** *MT-7474*	$ 312,119/81-89 58,834/89-90 59,215/90-91
0555	**FEASBY, THOMAS E.** **HAHN, ANGELIKA F.** *Clinical Neurological Sciences, Western Ontario* Pathogenesis of experimental allergic neuritis **1990-91 EP Apr 90–Jun 90** *MT-9329*	$ 194,167/85-89 52,872/89-90 13,218/90-91
0556	**FEATHERSTONE, MARK S.** *Cancer Centre, McGill* Characterization of a murine homeogene **1990-91 EP Apr 90–Mar 91** *MT-10548*	$ 64,977/89-90 67,950/90-91
0557	**FEDORAK, RICHARD N.** *Medicine, Alberta* Glucose carrier adaptation in small intestine **1990-91 EP Apr 90–Mar 91** *MT-10549*	$ 43,914/89-90 58,552/90-91
0558	**FEDORKO, LUDWIK M.** *Pediatrics, Toronto* Respiratory neuronal network and its neurotransmitters **1990-91 EP Apr 90–Sep 90** *MA-9849*	$ 70,886/87-89 45,380/89-90 22,952/90-91
0559	**FEDOROFF, SERGEY** *Anatomy, Saskatchewan* A study of early neurogenesis in tissue culture **1990-91 EP Apr 90–Mar 91** *MT-4235*	$ 837,339/73-89 85,526/89-90 94,031/90-91
0560	**FELDMAN, ROSS D.** *Medicine, Western Ontario* Adrenoceptor regulation in man *1990-91 expenditure breakdown: research support, $49,648; equipment, $7,603* **1990-91 EP Jul 90–Mar 91** *MT-10871*	$ 57,251/90-91
0561	**FENSTER, AARON** **HOBBS, BARRY B.** **CUNNINGHAM, IAN A.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* Development of a new imaging system for quantitative angiography and blood flow characterization **1990-91 EP Apr 90–Mar 91** *MT-6655*	$ 460,296/79-89 89,509/89-90 89,509/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0562	**FENSTER, AARON** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* **BATTISTA, JERRY J.** *Oncology, Western Ontario* **PORTER, ARTHUR T.** *Oncology, Western Ontario* Development of a portal digital-imaging system for radiotherapy **1990-91 EP Apr 90–Mar 91** *MA-9825*	$ 60,163/87-89 41,525/89-90 50,304/90-91
0563	**FENTRESS, JOHN C.** *Psychology, Dalhousie* Hierarchical control of adaptive and abnormal movement sequences and their relation to striatal mechanisms **1990-91 EP Apr 90–Mar 91** *MA-7660*	$ 268,964/82-89 47,277/89-90 47,736/90-91
0564	**FERGUSON, ALASTAIR V.** *Physiology, Queen's* Mechanisms of circulating hormone action within the central nervous system **1990-91 EP Apr 90–Mar 91** *MA-9120*	$ 169,954/85-89 51,191/89-90 54,059/90-91
0565	**FERRIER, GREGORY R.** *Pharmacology, Dalhousie* Physiology and pharmacology of transmembrane currents involved in the genesis of cardiac arrhythmia *1990-91 expenditure breakdown: research support, $47,670; equipment, $36,700* **1990-91 EP Apr 90–Mar 91** *MT-10242*	$ 55,000/88-89 31,303/89-90 84,370/90-91
0566	**FERRIER, GREGORY R.** *Pharmacology, Dalhousie* Mechanisms of cardiac arrhythmias **1990-91 EP Apr 90–Mar 91** *MA-10550*	$ 23,604/89-90 31,472/90-91
0567	**FEWELL, JAMES E.** *Obstetrics and Gynecology, Calgary* Ontogeny of arousal response from sleep to cardiorespiratory stimuli **1990-91 EP Apr 90–Mar 91** *MT-10573*	$ 55,500/89-90 74,000/90-91
0568	**FIBIGER, H. CHRISTIAN** *Psychiatry, British Columbia* Anatomy and function of central cholinergic systems **1990-91 EP Apr 90–Mar 91** *MT-4674*	$ 980,888/72-89 107,687/89-90 108,732/90-91
0569	**FIELD, L. LEIGH** *Pediatrics, Calgary* Genetic factors, and interaction with non-genetic factors, in insulin-dependent diabetes **1990-91 EP Apr 90–Mar 91** *MT-7910*	$ 273,490/85-89 75,000/89-90 75,000/90-91
0570	**FILLERY, EDWARD D.** *Dentistry, Toronto* Cell flow cytometry of bacteria in periodontal disease **1990-91 EP Apr 90–Jun 90** *MA-9439*	$ 193,868/85-89 62,605/89-90 15,804/90-91
0571	**FINE, ALAN** *Physiology and Biophysics, Dalhousie* Neural transplants: potential use in Alzheimer's disease **1990-91 EP Apr 90–Mar 91** *MT-9921*	$ 114,520/87-89 33,228/89-90 69,378/90-91
0572	**FINEGAN, JO-ANNE K.** *Behavioural Science, Toronto* Prenatal testosterone and postnatal behaviour **1990-91 EP Apr 90–Mar 91** *MA-10052*	$ 62,000/87-89 35,870/89-90 32,760/90-91
0573	**FINEGOOD, DIANE T.** *Medicine, Alberta* Interaction of diminished insulin secretion and enhanced insulin sensitivity in islet transplanted, exercise trained rats **1990-91 EP Apr 90–Mar 91** *MT-10574*	$ 51,638/89-90 58,698/90-91
0574	**FINLAY, B. BRETT** *Biochemistry, British Columbia* Characterization of Salmonella invasion genes and proteins **1990-91 EP Apr 90–Mar 91** *MT-10551*	$ 102,547/89-90 73,329/90-91
0575	**FINLAY, J. BRYAN** **BOURNE, ROBERT B.** **RORABECK, CECIL H.** *Surgery, Western Ontario* Factors affecting the performance of externally applied fracture-fixation systems **1990-91 EP Jul 90–Mar 91** *MT-10835*	$ 61,316/90-91
0576	**FISH, ELEANOR N.** *Microbiology, Toronto* Structure/function studies with recombinant human interferons **1990-91 EP Apr 90–Mar 91** *MA-10243*	$ 58,900/88-89 56,000/89-90 61,250/90-91
0577	**FISHER, JOHN T.** *Physiology, Queen's* Control of airway smooth muscle in the newborn *1990-91 expenditure breakdown: research support, $49,996; equipment, $9,662* **1990-91 EP Apr 90–Mar 91** *MT-10244*	$ 44,467/88-89 44,467/89-90 59,658/90-91
0578	**FISHER, MURRAY M.** *Medicine, Toronto* Protein synthesis and transport by the liver **1990-91 EP Apr 90–Mar 91** *MT-3170*	$ 928,218/68-89 73,000/89-90 73,000/90-91
0579	**FLANAGAN, JOHN G.** *Optometry, Waterloo* **TROPE, GRAHAM E.** *Ophthalmology, Toronto* Psychophysical investigation of large axon parvo- and magno-cellular function in the early detection of glaucoma *1990-91 expenditure breakdown: research support, $37,100; equipment, $17,709* **1990-91 EP Jul 90–Mar 91** *MA-11023*	$ 54,809/90-91

List No.	Grant/Award	Financial History
0580	**FLANAGAN, JOHN G.** *Optometry, Waterloo* Objective and subjective clinical assessment of spatio-temporal channels of the visual system **1990-91 EP Apr 90–Jun 90** *MA-9840*	$ 61,747/86-89 19,258/89-90 4,531/90-91
0581	**FLEMING, ALISON S.** *Psychology, Toronto* **SCHNEIDER, BRUCE A.** *Psychology, Toronto* **STEINER, MEIR** *Psychiatry, McMaster* **CORTER, CARL M.** *Psychology, Toronto* Maternal response to infant cues during the puerperium and relation to hormones **1990-91 EP Apr 90–Jun 90** *MA-10245*	$ 47,800/88-89 44,800/89-90 11,200/90-91
0582	**FLEMING, NORMAN** *Dentistry, Manitoba* Eicosanoids and salivary gland mucin secretion **1990-91 EP Apr 90–Mar 91** *MT-10552*	$ 54,909/89-90 73,212/90-91
0583	**FLETCHER, PAUL J.** **COSCINA, DONALD V.** *Psychiatry, Toronto* Brain serotonin, impulsivity and feeding behaviour *1990-91 expenditure breakdown: research support, $30,000; equipment, $5,000* **1990-91 EP Jul 90–Mar 91** *MA-11085*	$ 35,000/90-91
0584	**FLETCHER, WILLIAM A.** *Clinical Neurosciences, Calgary* Visual motor control in humans with lesions of frontal eye field *1990-91 expenditure breakdown: research support, $35,259; equipment, $10,168* **1990-91 EP Jul 90–Mar 91** *MT-10838*	$ 45,427/90-91
0585	**FLIEGEL, LARRY** *Pediatrics, Alberta* Molecular biology of the cardiac Na/H exchanger **1990-91 EP Apr 90–Mar 91** *MA-10721*	$ 52,977/89-90 49,452/90-91
0586	**FLINTOFF, WAYNE F.** *Microbiology and Immunology, Western Ontario* Molecular mechanisms of drug resistance in somatic cells **1990-91 EP Apr 90–Mar 91** *MT-5774*	$ 624,723/76-89 70,051/89-90 71,964/90-91
0587	**FLISS, HENRY** *Physiology, Ottawa* Oxidation of proteins in heart **1990-91 EP Jul 90–Mar 91** *MA-11017*	$ 31,650/90-91
0588	**FLORAS, JOHN S.** *Medicine, Toronto* Effects of atrial natriuretic factor and vasopressin on sympathetic nerve activity in humans **1990-91 EP Apr 90–Mar 91** *MT-9721*	$ 126,641/86-89 66,134/89-90 73,709/90-91
0589	**FLUMERFELT, BRIAN A.** *Anatomy, Western Ontario* Structural and chemical organization of the interpeduncular nucleus **1990-91 EP Apr 90–Mar 91** *MA-4471*	$ 821,756/71-89 86,149/89-90 80,930/90-91
0590	**FLYNN, T. GEOFFREY** *Biochemistry, Queen's* Structure and function of aldehyde reductases **1990-91 EP Apr 90–Mar 91** *MT-4826*	$ 611,977/73-89 58,337/89-90 71,685/90-91
0591	**FLYNN, T. GEOFFREY** *Biochemistry, Queen's* **YIP, CECIL C.** *Banting and Best Department of Medical Research, Toronto* Studies on the receptor of atrial natriuretic factor **1990-91 EP Apr 90–Jun 90** *MA-9564*	$ 293,000/85-89 90,000/89-90 22,500/90-91
0592	**FLYNN, T. GEOFFREY** *Biochemistry, Queen's* **PANG, STEPHEN C.-N.** *Anatomy, Queen's* Molecular and cell biology of atrial peptides *1990-91 expenditure breakdown: research support, $72,900; equipment, $5,206* **1990-91 EP Jul 90–Mar 91** *MT-10889*	$ 78,106/90-91
0593	**FOERSTER, ANNE P.** *Biomedical Sciences, McMaster* A search for spontaneous axonal regeneration in corpus callosum of adult rat **1990-91 EP Apr 90–Mar 91** *MA-10553*	$ 30,944/89-90 41,258/90-91
0594	**FORBES, ROBERT D.C.** *Pathology, McGill* Morphologic studies of acute and chronic cardiac allograft rejection **1990-91 EP Apr 90–Mar 91** *MT-6083*	$ 527,671/77-89 86,682/89-90 86,682/90-91
0595	**FORSDYKE, DONALD R.** *Biochemistry, Queen's* Role of lymphocyte G0/G1 growth regulatory genes in AIDS **1990-91 EP Apr 90–Mar 91** *MA-10766*	$ 30,000/89-90 65,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0596	**FORSTNER, GORDON G.** *Pediatrics, Toronto* **FORSTNER, JANET F.** *Biochemistry, Toronto* Functional and structural aspects of mucus glycoproteins and membrane glycoenzymes in the intestine *1990-91 expenditure breakdown: research support, $146,466; equipment, $2,000* **1990-91 EP Apr 90–Mar 91** *MT-2340*	$ 1,556,520/67-89 141,831/89-90 148,466/90-91	0604	**FRANKS, DOUGLAS J.** *Pathology, Ottawa* **DURKIN, JON P.** *Biological Sciences, National Research Council of Canada (Ottawa)* **WHITFIELD, JAMES F.** *Biological Sciences, National Research Council of Canada (Ottawa)* Growth regulation in mammalian cells **1990-91 EP Apr 90–Jun 90** *MA-8922*	$ 199,494/84-89 36,608/89-90 8,614/90-91
0597	**FOSTER, F. STUART** *Medical Biophysics, Toronto* Intravascular ultrasound scanner **1990-91 EP Apr 90–Mar 91** *MA-10554*	$ 103,791/89-90 72,248/90-91	0605	**FRANKS, DOUGLAS J.** *Pathology, Ottawa* Membrane signalling processes in mammalian cells **1990-91 EP Jul 90–Mar 91** *MT-10997*	$ 45,000/90-91
0598	**FOTEDAR, ARUN** *Immunology, Alberta* T cell recognition **1990-91 EP Apr 90–Jun 90** *MA-9875*	$ 158,755/86-89 54,665/89-90 12,862/90-91	0606	**FRASER, MURRAY J.** *Biochemistry, McGill* Enzymology of DNA repair and recombination in eukaryotes **1990-91 EP Apr 90–Jun 90** *MT-0862*	$ 1,349,979/60-89 98,756/89-90 24,929/90-91
0599	**FOURON, JEAN-CLAUDE** *Pédiatrie, Montréal* Experimental studies on fetal cardiac and circulatory pathophysiology using ultrasound techniques **1990-91 EP avr 90–mar 91** *MT-9722*	$ 147,923/86-89 55,500/89-90 64,054/90-91	0607	**FRASER, WILLIAM D.** *Obstétrique et gynécologie, Laval* **MOUTQUIN, JEAN-MARIE** *Obstétrique et gynécologie, Laval* **MARCOUX, SYLVIE** *Médecine sociale et préventive, Laval* A multicentre randomized controlled trial of early amniotomy **1990-91 EP avr 90–mar 91** *MA-10556*	$ 172,084/89-90 216,512/90-91
0600	**FOX, ALLAN J.** **KARLIK, STEPHEN J.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* Neuroimaging of organic dementia **1990-91 EP Apr 90–Jun 90** *MA-9125*	$ 76,856/85-89 27,881/89-90 6,970/90-91	0608	**FREEMAN, DAVID J.P.** *Medicine, Western Ontario* **GRANT, DAVID R.** *Surgery, Western Ontario* Drug interactions with cyclosporine *MA-10246*	$ 32,000/88-89 32,000/89-90 16,400/90-91
0601	**FRAHER, LAURENCE J.** **MCFADDEN, ROBIN G.** *Medicine, Western Ontario* Interstitial lung disease: role of chemokinetic mediators **1990-91 EP Apr 90–Mar 91** *MT-10555*	$ 34,500/89-90 46,000/90-91	0609	**FREEMAN, HUGH J.** *Medicine, British Columbia* Differentiation dependent mechanisms of membrane transport in disease **1990-91 EP Jul 90–Mar 91** *MA-10898*	$ 75,132/90-91
0602	**FRANK, CYRIL B.** *Surgery, Calgary* **SHRIVE, NIGEL G.** *Civil Engineering, Calgary* Ligament transplantation **1990-91 EP Apr 90–Mar 91** *MA-9858*	$ 190,619/86-89 116,820/89-90 135,238/90-91	0610	**FREEMAN, KARL B.** *Biochemistry, McMaster* Studies on the formation of mitochondria: brown adipose tissue uncoupling protein model *1990-91 expenditure breakdown: research support, $124,507; equipment, $5,000* **1990-91 EP Apr 90–Mar 91** *MT-1940*	$ 1,458,134/65-89 115,566/89-90 129,507/90-91
0603	**FRANK, GEORGE B.** *Pharmacology, Alberta* An investigation of the properties of opiate drug receptors located on excitable cell membranes *MA-7911*	$ 183,289/83-89 36,771/89-90 25,829/90-91	0611	**FRENCH, ANDREW S.** *Physiology, Alberta* Mechanisms of sensory transduction and adaptation **1990-91 EP Apr 90–Mar 91** *MT-4759*	$ 431,335/72-89 51,507/89-90 72,000/90-91

List No.	Grant/Award	Financial History
0612	**FRENCH, ROBERT J.** *Medical Physiology, Calgary* Ion channels in excitable membranes and planar lipid bilayers **1990-91 EP Apr 90–Mar 91** *MA-10053*	$ 76,650/87-89 52,595/89-90 47,117/90-91
0613	**FRIEDMAN, SYDNEY M.** *Anatomy, British Columbia* Sodium and potassium in hypertension **1990-91 EP Apr 90–Mar 91** *MA-0418*	$ 997,977/52-89 71,809/89-90 54,031/90-91
0614	**FRIESEN, HENRY G.** *Physiology, Manitoba* Studies of pituitary and related polypeptide hormones **1990-91 EP Apr 90–Mar 91** *MT-1862*	$ 3,085,902/65-89 274,206/89-90 276,868/90-91
0615	**FRIESEN, HENRY G.** *Physiology, Manitoba* Studies on the molecular biology of stanniocalcin and the stanniocalcin receptor **1990-91 EP Jul 90–Mar 91** *MT-10857*	$ 44,925/90-91
0616	**FRIESEN, JAMES D.** *Medical Genetics, Toronto* Genetic and molecular studies of RNA polymerase II in Saccharomyces cerevisiae **1990-91 EP Apr 90–Mar 91** *MT-7912*	$ 362,371/83-89 85,595/89-90 85,595/90-91
0617	**FRITZ, IRVING B.** *Banting and Best Department of Medical Research, Toronto* Controls of spermatogenesis *1990-91 expenditure breakdown: research support, $186,813; equipment, $24,532* **1990-91 EP Apr 90–Mar 91** *MT-3292*	$ 2,485,861/68-89 212,425/89-90 211,345/90-91
0618	**FRITZLER, MARVIN J.** *Medicine, Calgary* Autoantibodies in systemic rheumatic diseases **1990-91 EP Apr 90–Jun 90** *MA-6700*	$ 429,771/79-89 52,057/89-90 12,249/90-91
0619	**FRITZLER, MARVIN J.** *Medicine, Calgary* Autoantibodies in systemic rheumatic diseases *1990-91 expenditure breakdown: research support, $73,945; equipment, $8,260* **1990-91 EP Jul 90–Mar 91** *MT-10884*	$ 82,205/90-91
0620	**FROESE, ALISON B.** *Anesthesia, Queen's* Impact of ventilator pattern on surfactant in atelectasis-prone lung **1990-91 EP Apr 90–Jun 90** *MA-10248*	$ 40,462/88-89 40,462/89-90 10,115/90-91
0621	**FROJMOVIC, MONY M.** *Physiology, McGill* Dynamic studies of the regulation of human platelet aggregation: the role of glycoprotein IIb-IIIa in health and disease *MA-10257*	$ 66,205/88-89 66,205/89-90 53,792/90-91

N° de liste	Subvention/Bourse	Résumé financier
0622	**FRYER, JAMES N.** *Anatomy, Ottawa* Regulation of teleost pituitary hormone secretion **1990-91 EP Apr 90–Mar 91** *MT-7065*	$ 410,121/79-89 56,000/89-90 56,000/90-91
0623	**FUJITA, DONALD J.** *Medical Biochemistry, Calgary* Src-type oncogenes and their products: structure, expression and interactions with cellular regulatory mechanisms **1990-91 EP Apr 90–Mar 91** *MT-7066*	$ 602,685/79-89 75,000/89-90 75,000/90-91
0624	**FUNNELL, BARBARA E.** *Medical Genetics, Toronto* Minichromosome segregation: P1 plasmid partition in Escherichia coli *1990-91 expenditure breakdown: research support, $54,450; equipment, $4,111* **1990-91 EP Jul 90–Mar 91** *MT-10822*	$ 58,561/90-91
0625	**FUNNELL, W. ROBERT J.** *Biomedical Engineering, McGill* Quantitative modelling of the middle ear **1990-91 EP Apr 90–Mar 91** *MA-7913*	$ 256,655/83-89 78,344/89-90 66,152/90-91
0626	**GAGNAN-BRUNETTE, MICHELE** *Pédiatrie, Montréal* Etude du transport des minéraux par le placenta **1990-91 EP avr 90–mar 91** *MT-10557*	$ 74,410/89-90 88,136/90-91
0627	**GAGNON, CLAUDE** *Surgery, McGill* X and Y spermatozoa: separation and characterization **1990-91 EP Apr 90–Mar 91** *MA-9963*	$ 225,847/87-89 47,400/89-90 49,200/90-91
0628	**GAGNON, CLAUDE** *Surgery, McGill* Spermatozoa: regulation of motility and physiological importance of protein-carboxyl methylation **1990-91 EP Apr 90–Mar 91** *MT-6490*	$ 683,382/78-89 105,060/89-90 106,080/90-91
0629	**GAGNON, ROBERT** *Obstetrics and Gynecology, Western Ontario* Assessment of the myocardial contractility in the human fetus **1990-91 EP Apr 90–Mar 91** *MA-10558*	$ 33,062/89-90 44,082/90-91
0630	**GALIANA, HENRIETTA L.** *Biomedical Engineering, McGill* Bilateral connections in the oculomotor system **1990-91 EP Apr 90–Mar 91** *MA-8897*	$ 114,040/84-89 109,051/89-90 53,446/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0631	**GALL, D. GRANT** ***Pediatrics, Calgary*** Development and control of gastrointestinal tract function and the response to injury **1990-91 EP Apr 90–Mar 91** *MT-6707*	$ 620,377/81-89 164,839/89-90 151,623/90-91
0632	**GALLIE, BRENDA L.** ***Ophthalmology, Toronto*** The cell of origin of retinoblastoma **1990-91 EP Apr 90–Mar 91** *MA-6491*	$ 487,189/78-89 62,000/89-90 62,000/90-91
0633	**GALLIN, WARREN J.** ***Zoology, Alberta*** Reconstruction of organs from dissociated cells **1990-91 EP Apr 90–Mar 91** *MT-10559*	$ 19,275/89-90 25,700/90-91
0634	**GALLO-PAYET, NICOLE** ***Médecine, Sherbrooke*** Mécanismes d'action des facteurs contrôlant la sécrétion d'aldostérone **1990-91 EP jlt 90–mar 91** *MT-10998*	$ 44,120/90-91
0635	**GALLO-PAYET, NICOLE** ***Médecine, Sherbrooke*** Mécanismes d'action des facteurs contrôlant la sécrétion d'aldostérone **1990-91 EP avr 90–jui 90** *MA-9092*	$ 111,164/86-89 33,640/89-90 7,915/90-91
0636	**GALSWORTHY, SARA B.** ***Microbiology and Immunology, Western Ontario*** Regulation of macrophage production by Listeria monocytogenes *MA-8749*	$ 231,450/84-89 51,000/89-90 26,138/90-91
0637	**GANGULY, PALLAB K.** ***Anatomy, Manitoba*** Peptidergic regulation of sympathetic nerve function in cardiac hypertrophy **1990-91 EP Jul 90–Mar 91** *MA-11027*	$ 15,323/90-91
0638	**GANOZA, M. CLELIA** ***Banting and Best Department of Medical Research, Toronto*** Genetic and biochemical studies on the mechanisms of protein synthesis *1990-91 expenditure breakdown: research support, $151,316; equipment, $5,900* **1990-91 EP Apr 90–Mar 91** *MT-3407*	$ 1,677,311/68-89 147,084/89-90 157,216/90-91
0639	**GANZ, PETER R.** ***Biochemistry, Ottawa*** Studies on the interaction of clotting factor VIII with human platelets **1990-91 EP Apr 90–Mar 91** *MA-9964*	$ 63,878/87-89 42,091/89-90 43,572/90-91
0640	**GARFIELD, ROBERT E.** ***Biomedical Sciences, McMaster*** Control of myometrial contractility **1990-91 EP Apr 90–Mar 91** *MA-9482*	$ 331,867/86-89 141,430/89-90 93,229/90-91
0641	**GARIEPY, JEAN G.** ***Medical Biophysics, Toronto*** Synthesis and biophysical analysis of analogues of the E. coli ST I enterotoxin **1990-91 EP Apr 90–Jun 90** *MA-9724*	$ 149,980/86-89 55,830/89-90 13,958/90-91
0642	**GARNETT, E. STEPHEN** ***Radiology, McMaster*** **FIRNAU, GUNTER B.** ***Radiology, McMaster*** **NAHMIAS, CLAUDE** ***Radiology, McMaster*** **LANG, ANTHONY E.T.** ***Medicine, Toronto*** Intracerebral dopamine metabolism in man studied by a novel radioisotope technique **1990-91 EP Apr 90–Mar 91** *MT-5812*	$ 696,339/76-89 108,469/89-90 87,089/90-91
0643	**GARTNER, JOHN G.** ***Pathology, Manitoba*** Natural killer cells in the pathogenesis of graft-versus-host disease: a study of their surface marker characteristics, function and mechanism of activation **1990-91 EP Apr 90–Mar 91** *MA-9430*	$ 173,042/85-89 60,133/89-90 53,619/90-91
0644	**GASCON-BARRE, MARIELLE** ***Pharmacologie, Montréal*** Rôle du foie dans l'homéostasie "nutritionnelle" et "hormonale" du calciférol (vitamine D3) **1990-91 EP avr 90–mar 91** *MT-6511*	$ 441,823/78-89 68,289/89-90 68,952/90-91
0645	**GAUDREAU, PIERRETTE** ***Médecine, Montréal*** Design of potent and selective agonists of human growth hormone releasing factor(1-29) amide **1990-91 EP avr 90–mar 91** *MA-10722*	$ 41,595/89-90 52,793/90-91
0646	**GAULDIE, JACK** ***Pathology, McMaster*** Cytokine involvement (interleukin 1, interleukin 6) in control of the inflammatory response **1990-91 EP Apr 90–Mar 91** *MA-8616*	$ 258,089/84-89 69,987/89-90 71,519/90-91
0647	**GAULDIE, JACK** ***Pathology, McMaster*** The human interstitial pulmonary fibroblast in lung disease **1990-91 EP Apr 90–Mar 91** *MA-8571*	$ 275,966/84-89 69,124/89-90 65,445/90-91
0648	**GAULT, MATHEW H.** **VASDEV, SUDESH C.** ***Medicine, Memorial University of Newfoundland*** Digitalis-like factors *MA-9566*	$ 229,127/81-89 37,833/89-90 19,389/90-91

List No.	Grant/Award	Financial History
0649	**GAVINO, VICTOR C.** *Nutrition, Montréal* Regulation of polyunsaturated fatty acid metabolism **1990-91 EP avr 90–mar 91** *MA-10249*	$ 53,700/88-89 45,000/89-90 50,500/90-91
0650	**GEDAMU, LASHITEW** *Biological Sciences, Calgary* Molecular mechanisms of metallothionein gene regulation **1990-91 EP Apr 90–Mar 91** *MT-8190*	$ 274,255/83-89 70,000/89-90 70,000/90-91
0651	**GEIGER, JONATHAN D.** *Pharmacology and Therapeutics, Manitoba* **NAGY, JAMES I.** *Physiology, Manitoba* Metabolism, pharmacology and biochemical neuroanatomy of purines in the central nervous system *MA-9423*	$ 204,042/85-89 71,583/89-90 58,335/90-91
0652	**GEIGER, JONATHAN D.** *Pharmacology and Therapeutics, Manitoba* Adenosine transport in the central nervous system tissues **1990-91 EP Apr 90–Mar 91** *MT-8901*	$ 209,012/84-89 42,918/89-90 50,150/90-91
0653	**GERBER, GERHARD E.** *Biochemistry, McMaster* Chemical approaches to the structure and function of membranes: fatty acid translocation across plasma membranes **1990-91 EP Apr 90–Mar 91** *MT-6488*	$ 488,452/78-89 58,000/89-90 58,000/90-91
0654	**GERMINARIO, RALPH J.** *Lady Davis Institute for Medical Research, Sir Mortimer B. Davis-Jewish General Hospital* Cell culture studies into the nature of the factor(s) controlling insulin stimulation of sugar transport *MA-5543*	$ 715,181/74-89 73,542/89-90 59,932/90-91
0655	**GERRARD, JONATHAN M.** *Pediatrics and Child Health, Manitoba* The cell biology of blood platelets **1990-91 EP Apr 90–Mar 91** *MA-7396*	$ 459,813/80-89 68,202/89-90 70,289/90-91
0656	**GERTZBEIN, STANLEY D.** *Surgery, Toronto* Segmental spinal instability: in vivo quantifiable method of analysis **1990-91 EP Apr 90–Mar 91** *MA-10180*	$ 31,500/88-89 31,500/89-90 20,625/90-91
0657	**GERVAIS, FRANCINE** **SKAMENE, EMIL** *Medicine, McGill* Genetic control of susceptibility to murine AIDS **1990-91 EP Oct 90–Mar 91** *MA-11168*	$ 47,483/90-91
0658	**GERVAIS, FRANCINE** *Medicine, McGill* The amyloid enhancing factor in the pathogenesis of amyloidosis **1990-91 EP Apr 90–Mar 91** *MT-10250*	$ 46,480/88-89 43,980/89-90 65,460/90-91
0659	**GHOSE, TARUNENDU** *Pathology, Dalhousie* **LUNER, STEPHEN J.** *Pathology, Dalhousie* **BLAIR, A. HUNTLEY** *Biochemistry, Dalhousie* Preclinical evaluation of methotrexate-antihuman-breast-cancer-monoclonal antibody conjugates in xenograft models **1990-91 EP Jul 90–Mar 91** *MT-10964*	$ 77,189/90-91
0660	**GHOSE, TARUNENDU** *Pathology, Dalhousie* **BLAIR, A. HUNTLEY** *Biochemistry, Dalhousie* **LUNER, STEPHEN J.** *Pathology, Dalhousie* Drug targeting with monoclonal antitumor antibodies: design of improved conjugates and their evaluation in eradicating human tumor xenografts, especially carcinoma of the breast **1990-91 EP Apr 90–Jun 90** *MA-10008*	$ 144,351/87-89 68,000/89-90 16,000/90-91
0661	**GHOSH, HARA P.** *Biochemistry, McMaster* Studies on enveloped animal viruses **1990-91 EP Apr 90–Mar 91** *MT-3514*	$ 1,411,575/69-89 147,084/89-90 152,731/90-91
0662	**GIANOULAKIS, CHRISTINA** *Psychiatry, McGill* Morphine and alcohol addiction as related to the endogenous opiate system. Addicted mothers: fetal and neonatal consequences *MA-6923*	$ 314,989/81-89 48,328/89-90 33,947/90-91
0663	**GIBB, WILLIAM** *Obstetrics and Gynecology, Ottawa* Endocrine studies in pregnancy **1990-91 EP Apr 90–Mar 91** *MA-10251*	$ 51,747/88-89 50,000/89-90 50,000/90-91
0664	**GIBSON, CANDACE J.** *Pathology, Western Ontario* Aromatic amino acid and monoamine metabolism in diabetic rat *1990-91 expenditure breakdown: research support, $49,233; equipment, $6,800* **1990-91 EP Apr 90–Mar 91** *MT-10197*	$ 55,000/88-89 55,000/89-90 56,033/90-91
0665	**GIBSON, DAVID M.** *Biochimie, Sherbrooke* Organisation et mutation somatique des gènes kappa des immunoglobulines de souris **1990-91 EP avr 90–mar 91** *MT-4317*	$ 1,047,262/71-89 97,544/89-90 90,026/90-91

N° de liste	Subvention/Bourse	Résumé financier

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0666	**GIGUERE, VINCENT** ***Medical Genetics, Toronto*** Structure and function of steroid hormone receptors **1990-91 EP Apr 90–Mar 91** *MA-10561*	$ 52,900/89-90 70,000/90-91	0675	**GLICKMAN, BARRY W.** ***Biology, York*** Monitoring mutation in human populations: analysis of mutational specificity in vivo and in vitro **1990-91 EP Apr 90–Mar 91** *MA-8677*	$ 406,194/84-89 133,400/89-90 160,083/90-91
0667	**GILES, ALAN R.** ***Pathology, Queen's*** The regulation of hemostasis *1990-91 expenditure breakdown: research support, $89,006; equipment, $21,317* **1990-91 EP Apr 90–Mar 91** *MT-7667*	$ 452,102/82-89 79,846/89-90 110,323/90-91	0676	**GODBOUT, ROSELINE** ***Biochemistry, Alberta*** Gene expression in the developing retina **1990-91 EP Jul 90–Mar 91** *MT-10930*	$ 52,500/90-91
0668	**GILLAM, SHIRLEY** ***Pathology, British Columbia*** Molecular studies of rubella virus: expression of rubella virus antigens **1990-91 EP Apr 90–Mar 91** *MA-8325*	$ 352,325/84-89 80,391/89-90 80,391/90-91	0677	**GOH, JOANNE W.Y.** ***Pharmacology and Toxicology, Queen's*** Accumulation of extracellular K+ as a mechanism for induction of hippocampal long-term potentiation *1990-91 expenditure breakdown: research support, $40,080; equipment, $10,000* **1990-91 EP Jul 90–Mar 91** *MT-10858*	$ 50,080/90-91
0669	**GINGRAS, GABRIEL** ***Biochimie, Montréal*** Contrôle de l'expression génétique chez les Rhodospirillales **1990-91 EP avr 90–mar 91** *MT-7178*	$ 417,604/79-89 62,935/89-90 62,935/90-91	0678	**GOLD, MARVIN** ***Medical Genetics, Toronto*** Biochemical and genetic analysis of a multifunctional DNA-binding protein **1990-91 EP Apr 90–Mar 91** *MA-10383*	$ 71,000/88-89 71,000/89-90 71,000/90-91
0670	**GINSBERG, JODY** ***Medicine, Alberta*** The role of protein kinase C in the regulation of thyroid function **1990-91 EP Jul 90–Mar 91** *MT-11019*	$ 41,028/90-91	0679	**GOLD, REYNOLD J.M.** ***Medical Genetics, Toronto*** Induction of crystallin gene transcription in fibroblasts by ocular protein **1990-91 EP Apr 90–Jun 90** *MT-9435*	$ 230,248/85-89 60,000/89-90 15,000/90-91
0671	**GINSBERG, JODY** ***Medicine, Alberta*** The role of protein kinase C in the regulation of differentiated thyroid function **1990-91 EP Apr 90–Jun 90** *MA-9826*	$ 81,480/87-89 34,629/89-90 8,148/90-91	0680	**GOLDBERG, HARVEY A.** ***Dentistry, Western Ontario*** Proteoglycans of bone **1990-91 EP Apr 90–Mar 91** *MT-10575*	$ 81,501/89-90 59,255/90-91
0672	**GLADMAN, DAFNA D.** ***Medicine, Toronto*** **FAREWELL, VERNON T.** ***Health Studies, Waterloo*** Prognostic indicators in psoriatic arthritis **1990-91 EP Apr 90–Mar 91** *MA-10562*	$ 27,308/89-90 30,000/90-91	0681	**GOLDSMITH, HARRY L.** ***Medicine, McGill*** Flow behaviour of blood corpuscles *1990-91 expenditure breakdown: research support, $88,967; equipment, $16,135* **1990-91 EP Apr 90–Mar 91** *MT-1835*	$ 1,061,992/65-89 86,212/89-90 105,102/90-91
0673	**GLAVIN, GARY B.** ***Pharmacology and Therapeutics, Manitoba*** Characterization of dopaminergic activity in gastric pathology **1990-91 EP Apr 90–Mar 91** *MA-9947*	$ 67,774/87-89 49,642/89-90 44,486/90-91	0682	**GOLTZMAN, DAVID** ***Physiology, McGill*** Hormonal regulation of calcium and skeletal homeostasis **1990-91 EP Apr 90–Mar 91** *MT-5775*	$ 996,367/76-89 133,426/89-90 134,722/90-91
0674	**GLAVINOVIC, MLADEN I.** ***Physiology, McGill*** Excitatory transmitter receptor interactions **1990-91 EP Apr 90–Mar 91** *MA-10796*	$ 57,850/89-90 53,400/90-91	0683	**GOODALE, MELVYN A.** ***Psychology, Western Ontario*** Visual control of manual prehension: functional organization and neural substrates **1990-91 EP Apr 90–Mar 91** *MA-7269*	$ 309,199/80-89 37,822/89-90 48,279/90-91

List No.	Grant/Award	Financial History
0684	**GOODFELLOW, PAUL J.** *Medical Genetics, British Columbia* A combined somatic cell and molecular genetics approach to cloning the MEN-2A gene **1990-91 EP Apr 90–Mar 91** *MT-10563*	$ 76,750/89-90 73,000/90-91
0685	**GOODWIN, PAMELA J.** *Medicine, Toronto* **LOCKWOOD, GINA** *Ontario Cancer Institute (Toronto)* **HARTWICK, R. WARREN J.** *Pathology, Toronto* **BOYD, NORMAN F.** *Medicine, Toronto* **MURRAY, DAVID** *Pathology, Toronto* **HANNA, WEDAD M.** *Pathology, Toronto* Plasma lipids and lipoproteins in benign and malignant breast disease **1990-91 EP Apr 90–Mar 91** *MT-10564*	$ 76,718/89-90 102,291/90-91
0686	**GOODYER, CYNTHIA G.** *Pediatrics, McGill* Study of pituitary endocrinopathies **1990-91 EP Apr 90–Mar 91** *MT-7270*	$ 254,855/80-89 53,751/89-90 54,487/90-91
0687	**GORCZYNSKI, REGINALD M.** *Surgery, Toronto* Transplantation immunity to minor histocompatibility antigens in adults **1990-91 EP Jul 90–Mar 91** *MA-10924*	$ 52,429/90-91
0688	**GORCZYNSKI, REGINALD M.** *Surgery, Toronto* Transplantation immunity to major and minor histocompatibility antigens **1990-91 EP Apr 90–Jun 90** *MT-5440*	$ 769,470/75-89 68,979/89-90 16,230/90-91
0689	**GOREN, H. JOSEPH** *Medical Biochemistry, Calgary* Insulin signal transduction: isolation and characterization of an insulin receptor substrate **1990-91 EP Jul 90–Mar 91** *MA-11028*	$ 50,137/90-91
0690	**GORESKY, CARL A.** **ROSE, COLIN P.** *Medicine, McGill* Transcapillary exchange, cellular entry, and disposal processes in well-perfused organs **1990-91 EP Apr 90–Mar 91** *MT-0865*	$ 1,338,800/60-89 101,157/89-90 98,750/90-91
0691	**GORESKY, CARL A.** *Medicine, McGill* Liver function and bilirubin metabolism in health and disease *MT-9111*	$ 194,517/85-89 52,470/89-90 36,730/90-91
0692	**GOTLIEB, AVRUM I.** *Pathology, Toronto* Studies on mammalian cell locomotion **1990-91 EP Apr 90–Mar 91** *MT-6485*	$ 601,299/78-89 102,941/89-90 111,042/90-91
0693	**GOTMAN, JEAN** *Neurology and Neurosurgery, McGill* State-dependent automatic detection of epileptiform activity in the EEG *1990-91 expenditure breakdown: research support, $55,884; equipment, $9,548* **1990-91 EP Apr 90–Mar 91** *MT-10189*	$ 54,486/88-89 38,305/89-90 65,432/90-91
0694	**GOTTFRIED, STEWART B.** *Medicine, McGill* Effect of constant positive applied pressure on respiratory muscle function in severe chronic obstructive pulmonary disease **1990-91 EP Apr 90–Mar 91** *MT-10253*	$ 33,480/88-89 28,545/89-90 28,545/90-91
0695	**GOUGOUX, ANDRE** *Médecine, Montréal* Cellular defects in proximal acidification **1990-91 EP avr 90–mar 91** *MT-7876*	$ 449,123/82-89 88,819/89-90 88,819/90-91
0696	**GRAHAM, FRANK L.** *Biology, McMaster* Molecular studies on human adenovirus DNA structure and function **1990-91 EP Apr 90–Mar 91** *MA-6762*	$ 665,616/81-89 105,060/89-90 106,080/90-91
0697	**GRANT, CHRISTOPHER W.M.** *Biochemistry, Western Ontario* Eukaryotic cell surface carbohydrate bearing components **1990-91 EP Apr 90–Mar 91** *MT-5441*	$ 484,150/75-89 64,745/89-90 56,469/90-91
0698	**GRANT, DENIS M.** *Pediatrics, Toronto* Molecular pharmacogenetics of human drug-metabolizing enzymes *1990-91 expenditure breakdown: research support, $45,000; equipment, $26,000* **1990-91 EP Jul 90–Mar 91** *MT-10890*	$ 71,000/90-91
0699	**GRASSINO, ALEJANDRO E.** *Medicine, McGill* In vivo studies of respiratory muscle function **1990-91 EP Apr 90–Mar 91** *MT-7861*	$ 418,670/82-89 110,333/89-90 114,753/90-91
0700	**GRASSINO, ALEJANDRO E.** *Médecine, Montréal* Respiratory muscle function **1990-91 EP avr 90–mar 91** *MA-7073*	$ 375,880/79-89 50,954/89-90 51,449/90-91
0701	**GRATTON, ALAIN** *Psychiatry, McGill* Depolarization inactivation of dopamine neurons by stress: a possible cause of depression **1990-91 EP Apr 90–Mar 91** *MA-10735*	$ 38,647/89-90 35,530/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0702	**GRAVEL, ROY A.** ***Pediatrics, McGill*** Genetics of beta-hexosaminidase and mutation in Tay-Sachs disease **1990-91 EP Apr 90–Mar 91** *MA-10432*	$ 90,000/88-89 120,000/89-90 120,000/90-91	0712	**GREENBLATT, JACK F.** ***Banting and Best Department of Medical Research, Toronto*** Enzymology of transcriptional initiation by human RNA polymerase II **1990-91 EP Apr 90–Mar 91** *MA-8556*	$ 233,305/84-89 66,307/89-90 66,307/90-91
0703	**GRAVEL, ROY A.** ***Pediatrics, McGill*** Molecular genetics of propionicacidemia **1990-91 EP Apr 90–Mar 91** *MT-5698*	$ 539,012/83-89 116,700/89-90 116,700/90-91	0713	**GREENSHAW, ANDREW J.** ***Psychiatry, Alberta*** 5-HT3 receptor antagonists as novel and therapeutically advantageous antipsychotic drugs: a preclinical analysis **1990-91 EP Jul 90–Mar 91** *MT-11080*	$ 32,165/90-91
0704	**GRAY, MICHAEL W.** ***Biochemistry, Dalhousie*** Structure, function and evolution of mitochondrial nucleic acids **1990-91 EP Apr 90–Mar 91** *MT-4124*	$ 896,592/70-89 142,277/89-90 166,532/90-91	0714	**GREENWAY, CLIVE V.** ***Pharmacology and Therapeutics, Manitoba*** Blood flow, blood volume and fluid exchange in the liver, intestine and spleen **1990-91 EP Apr 90–Mar 91** *MT-2854*	$ 782,816/67-89 84,869/89-90 84,869/90-91
0705	**GREEN, DOUGLAS R.** ***Immunology, Alberta*** Antigen-specific regulatory T cell molecules **1990-91 EP Apr 90–Jun 90** *MA-9949*	$ 134,781/87-89 65,467/89-90 15,404/90-91	0715	**GRINSTEIN, SERGIO** ***Biochemistry, Toronto*** Molecular mechanisms of exocytosis **1990-91 EP Apr 90–Mar 91** *MT-7075*	$ 497,501/79-89 73,408/89-90 74,121/90-91
0706	**GREEN, DOUGLAS R.** ***Immunology, Alberta*** T-cell lymphokines in thermal trauma immunodeficiency **1990-91 EP Apr 90–Mar 91** *MA-9950*	$ 87,500/87-89 32,259/89-90 33,618/90-91	0716	**GRONOSTAJSKI, RICHARD M.** ***Medical Biophysics, Toronto*** Nuclear factor I interaction with DNA **1990-91 EP Apr 90–Mar 91** *MA-9610*	$ 201,950/85-89 75,000/89-90 75,000/90-91
0707	**GREEN, DOUGLAS R.** ***Immunology, Alberta*** Antigen-specific regulatory T-cell factors and the T-cell receptor **1990-91 EP Jul 90–Mar 91** *MA-10902*	$ 65,250/90-91	0717	**GROOM, ALAN C.** ***Medical Biophysics, Western Ontario*** Physiological role of the spleen with respect to red blood cells **1990-91 EP Apr 90–Mar 91** *MT-4799*	$ 579,528/72-89 71,000/89-90 71,000/90-91
0708	**GREENBERG, ARNOLD H.** ***Pediatrics and Child Health, Manitoba*** Mechanisms of natural resistance **1990-91 EP Apr 90–Mar 91** *MT-5390*	$ 685,151/74-89 86,590/89-90 86,590/90-91	0718	**GROS, PHILIPPE** ***Biochemistry, McGill*** Structural and functional characterization of the mdr gene family **1990-91 EP Apr 90–Mar 91** *MA-9626*	$ 202,764/85-89 84,000/89-90 84,000/90-91
0709	**GREENBERG, CHERYL R.** ***Pediatrics and Child Health, Manitoba*** **SEARGEANT, LORNE E.** ***Biochemistry and Molecular Biology, Manitoba*** Molecular genetics of hypophosphatasia **1990-91 EP Apr 90–Mar 91** *MA-10565*	$ 36,881/89-90 49,175/90-91	0719	**GROS, PHILIPPE** ***Biochemistry, McGill*** **SHIELDS, EDWARD D.** ***Dentistry, McGill*** **MORGAN, KENNETH** ***Epidemiology and Biostatistics, McGill*** **SKAMENE, EMIL** ***Medicine, McGill*** Genetic control of susceptibility to leprosy **1990-91 EP Apr 90–Mar 91** *MA-10566*	$ 34,560/89-90 46,080/90-91
0710	**GREENBERG, GORDON R.** ***Medicine, Toronto*** Role of gastrointestinal hormones in health and disease **1990-91 EP Apr 90–Mar 91** *MA-6763*	$ 294,204/81-89 65,844/89-90 79,097/90-91	0720	**GROSS, PAUL M.** ***Surgery, Queen's*** Microvessels and metabolism of area postrema *MA-9952*	$ 156,173/87-89 61,800/89-90 31,823/90-91
0711	**GREENBLATT, JACK F.** ***Banting and Best Department of Medical Research, Toronto*** Regulation of transcription termination **1990-91 EP Apr 90–Mar 91** *MT-6092*	$ 750,236/77-89 103,000/89-90 103,000/90-91			

List No.	Grant/Award	Financial History
0721	**GROVER, ASHOK K.** *Biomedical Sciences, McMaster* Calcium ion movements in smooth muscle **1990-91 EP Apr 90–Mar 91** *MA-9472*	$ 201,413/86-89 72,479/89-90 72,479/90-91
0722	**GROVES, HALLIE M.** *Biomedical Sciences, McMaster* Factors influencing vessel wall reactivity **1990-91 EP Apr 90–Mar 91** *MT-10567*	$ 21,356/89-90 28,475/90-91
0723	**GRYNPAS, MARC D.** *Pathology, Toronto* Aging bone loss and osteoporosis in humans and primates **1990-91 EP Apr 90–Mar 91** *MA-9966*	$ 71,623/87-89 47,681/89-90 52,362/90-91
0724	**GUEVARA, MICHAEL R.** *Physiology, McGill* Synchronization and abolition of activity in the sinoatrial node *MA-9687*	$ 124,421/86-89 43,413/89-90 30,389/90-91
0725	**GUIDOIN, ROBERT G.** *Chirurgie, Laval* **ROY, RAYNALD** *Médecine, Laval* **DOUVILLE, YVAN** *Chirurgie, Laval* **ROY, PAUL-EMILE** *Pathologie, Laval* Etudes sur les substituts artériellles *1990-91 ventilation des dépenses: aide à la recherche, $250,465; appareils, $43,619* **1990-91 EP avr 90–mar 91** *MT-7879*	$ 1,260,601/82-89 226,457/89-90 284,084/90-91
0726	**GUILLEMETTE, GAETAN** *Pharmacologie, Sherbrooke* Mécanisme d'action de l'angiotensine II **1990-91 EP avr 90–mar 91** *MA-9953*	$ 76,300/87-89 74,204/89-90 44,824/90-91
0727	**GUITTON, DANIEL** *Neurology and Neurosurgery, McGill* Neural control of gaze using coordinated eye and head movements *1990-91 expenditure breakdown: research support, $76,741; equipment, $50,000* **1990-91 EP Apr 90–Mar 91** *MT-9222*	$ 203,779/85-89 54,631/89-90 126,741/90-91
0728	**GUPTA, RADHEY S.** *Biochemistry, McMaster* Role of a mitochondrial chaperonin and the major heat-shock protein (hsp70) in microtubule assembly and cell structure and function **1990-91 EP Apr 90–Mar 91** *MT-6638*	$ 912,802/78-89 126,589/89-90 134,815/90-91
0729	**GUPTA, RADHEY S.** *Biochemistry, McMaster* Synthesis and biological activity of novel epipodophyllotoxin derivatives showing anti-cancer activity *1990-91 expenditure breakdown: research support, $50,769; equipment, $2,395* **1990-91 EP Apr 90–Mar 91** *MT-9270*	$ 147,053/85-89 42,024/89-90 53,164/90-91
0730	**GUPTA, V. SAGAR** *Veterinary Physiological Sciences, Saskatchewan* **TOURIGNY, GUY** *Chemistry, Saskatchewan* Antiviral drugs: studies on 5-substituted-2'-deoxycytidines **1990-91 EP Apr 90–Mar 91** *MA-10254*	$ 53,605/88-89 37,945/89-90 37,945/90-91
0731	**GUPTA, V. SAGAR** *Veterinary Physiological Sciences, Saskatchewan* **TOURIGNY, GUY** *Chemistry, Saskatchewan* Chemotherapy of AIDS: studies on heterocyclic derivatives of phosphonoformate *MA-10120*	$ 57,569/88-89 57,569/89-90 40,298/90-91
0732	**GURD, JAMES W.** *Biochemistry, Toronto* Structure and function of synaptic glycoproteins *MT-5884*	$ 481,745/76-89 56,732/89-90 46,233/90-91
0733	**GUTKOWSKA, JOLANTA** *Médecine, Montréal* **SIROIS, PIERRE** *Pharmacologie, Sherbrooke* Nature and physiological significance of lung atrial natriuretic factor **1990-91 EP avr 90–mar 91** *MT-10337*	$ 45,000/88-89 45,000/89-90 61,650/90-91
0734	**GUYDA, HARVEY J.** *Pediatrics, McGill* Studies of growth hormone and anabolic peptides *MA-4403*	$ 1,182,490/71-89 119,005/89-90 83,591/90-91
0735	**GWYN, D. GRAHAM** **RUTHERFORD, JOHN G.** *Anatomy, Dalhousie* Organization and neurochemistry of projections to the dorsal motor nucleus of the vagus *MA-10255*	$ 47,620/88-89 43,870/89-90 22,483/90-91
0736	**HABERMAN, HERBERT F.** **MENON, I. ARAVINDAKSHAN** *Medicine, Toronto* Photobiologic reactions of pheomelanin and their relationships to skin diseases **1990-91 EP Apr 90–Mar 91** *MT-10297*	$ 37,700/88-89 37,700/89-90 42,398/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0737	**HACHINSKI, VLADIMIR C.** *Clinical Neurological Sciences, Western Ontario* **CECHETTO, DAVID F.** *Physiology, Western Ontario* Cardiovascular consequences of experimental stroke *1990-91 expenditure breakdown: research support, $37,445; equipment, $11,000* **1990-91 EP Jul 90–Mar 91** *MA-10969*	$ 48,445/90-91
0738	**HAKIM, ANTOINE M.** *Neurology and Neurosurgery, McGill* Calcium channel activity in two models of selective cerebral vulnerability **1990-91 EP Apr 90–Mar 91** *MA-8789*	$ 239,780/84-89 56,960/89-90 56,565/90-91
0739	**HALES, BARBARA F.** **ROBAIRE, BERNARD** *Pharmacology and Therapeutics, McGill* Paternally mediated adverse drug effects on progeny **1990-91 EP Apr 90–Mar 91** *MT-10462*	$ 53,500/89-90 66,000/90-91
0740	**HALES, BARBARA F.** *Pharmacology and Therapeutics, McGill* The role of reactive metabolites in drug-induced teratogenesis **1990-91 EP Apr 90–Mar 91** *MT-7078*	$ 424,223/79-89 66,240/89-90 66,883/90-91
0741	**HALLENBECK, PATRICK C.** *Microbiologie et immunologie, Montréal* Regulation of anaerobic metabolism: the role of cis- and trans-acting elements *1990-91 ventilation des dépenses: aide à la recherche, $57,163; appareils, $15,535* **1990-91 EP avr 90–mar 91** *MT-10424*	$ 62,020/88-89 47,764/89-90 72,698/90-91
0742	**HALLETT, PETER E.** *Physiology, Toronto* Beyond the cortical simple cell: two computer models of visual texture discrimination **1990-91 EP Jul 90–Mar 91** *MA-10991*	$ 14,024/90-91
0743	**HALLETT, PETER E.** *Physiology, Toronto* Cortical contributions to saccades: a combined oculomotor and evoked potential approach **1990-91 EP Apr 90–Mar 91** *MA-10463*	$ 58,644/89-90 56,305/90-91
0744	**HALLONQUIST, JOHN D.** *Psychiatry, Toronto* Circadian rhythms and affective disorders **1990-91 EP Apr 90–Mar 91** *MA-10464*	$ 37,214/89-90 49,618/90-91
0745	**HALLORAN, PHILIP F.** *Medicine, Alberta* In vivo regulation of major histocompatibility complex expression **1990-91 EP Apr 90–Mar 91** *MT-5739*	$ 700,637/75-89 73,542/89-90 103,190/90-91
0746	**HALPERIN, MITCHELL L.** *Medicine, Toronto* Regulation of intermediary metabolism **1990-91 EP Apr 90–Mar 91** *MT-3363*	$ 1,439,685/68-89 139,021/89-90 139,021/90-91
0747	**HALPERIN, MITCHELL L.** *Medicine, Toronto* Regulation of acid excretion by the kidney **1990-91 EP Apr 90–Mar 91** *MT-5623*	$ 737,629/75-89 120,000/89-90 120,000/90-91
0748	**HAMEL, EDITH** *Neurologie et neurochirurgie, McGill* Aspects morphologique, biochimique et physiologique de l'innervation cérébrovasculaire **1990-91 EP avr 90–mar 91** *MA-9967*	$ 69,833/87-89 55,333/89-90 46,407/90-91
0749	**HAMERTON, JOHN L.** *Human Genetics, Manitoba* Mapping the human genome, with special reference to chromosomes 1 and 15 **1990-91 EP Apr 90–Mar 91** *MA-4061*	$ 2,519,328/70-89 135,000/89-90 135,000/90-91
0750	**HAMET, PAVEL** *Médecine, Montréal* **PALMOUR, ROBERTA M.** *Psychiatry, McGill* Characterization of primate model for human hypertension *MA-10799*	$ 14,075/90-91
0751	**HAMET, PAVEL** *Médecine, Montréal* Genetic and cellular determinants of increased growth of vascular smooth muscle in spontaneously hypertensive rats **1990-91 EP jlt 90–mar 91** *MA-10803*	$ 43,817/90-91
0752	**HAMET, PAVEL** **TREMBLAY, JOHANNE** *Médecine, Montréal* Interaction of nutritional sodium and calcium in hypertension *1990-91 ventilation des dépenses: aide à la recherche, $48,679; appareils, $2,600* **1990-91 EP jlt 90–mar 91** *MT-10802*	$ 51,279/90-91
0753	**HAMILTON, IAN R.** *Dentistry, Manitoba* **FRENETTE, MICHEL** *Biochimie, Laval* **VADEBONCOEUR, CHRISTIAN** *Biochimie, Laval* Regulation of the P-enolpyruvate phosphotransferase sugar transport system in oral streptococci *MA-10298*	$ 123,422/88-89 114,746/89-90 90,201/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0754	**HAMILTON, IAN R.** *Dentistry, Manitoba* Energy metabolism and adaptation by ecologically important oral bacteria *1990-91 expenditure breakdown: research support, $97,425; equipment, $9,470* **1990-91 EP Apr 90–Mar 91** *MT-3546*	$ 913,987/69-89 89,301/89-90 106,895/90-91	0762	**HANLY, JOHN G.** *Medicine, Dalhousie* Antineuronal antibody specificities and their clinical significance in neuropsychiatric systemic lupus erythematosus **1990-91 EP Apr 90–Mar 91** *MA-10465*	$ 48,730/89-90 65,000/90-91
0755	**HAMILTON, J. RICHARD** *Pediatrics, McGill* Ion transport in small intestinal crypt and villus cells **1990-91 EP Apr 90–Mar 91** *MT-6708*	$ 884,487/81-89 111,228/89-90 112,308/90-91	0763	**HANNAH, MARY E.** *Obstetrics and Gynecology, Toronto* **HELLMAN, JONATHAN** *Pediatrics, Toronto* **HANNAH, WALTER J.** *Obstetrics and Gynecology, Toronto* **MILNER, RUTH A.** *Clinical Epidemiology and Biostatistics, McMaster* Canadian multicentre randomized controlled trial of the treatment of post-term pregnancy **1990-91 EP Apr 90–Mar 91** *MA-8472*	$ 848,170/85-89 279,821/89-90 354,149/90-91
0756	**HAMMOND, JAMES R.** *Pharmacology and Toxicology, Western Ontario* Characterization, isolation, and reconstitution of nucleoside transport systems *1990-91 expenditure breakdown: research support, $53,933; equipment, $12,000* **1990-91 EP Apr 90–Mar 91** *MT-10198*	$ 64,000/88-89 48,000/89-90 65,933/90-91	0764	**HANNAM, ALAN G.** **LOWE, ALAN A.** *Dentistry, British Columbia* Jaw muscle activity, dental occlusion and craniofacial morphology **1990-91 EP Apr 90–Mar 91** *MA-3849*	$ 1,293,898/69-89 153,240/89-90 119,465/90-91
0757	**HAMPSON, DAVID R.** *Pharmacy, Toronto* Molecular characterization of non-NMDA receptors *1990-91 expenditure breakdown: research support, $24,850; equipment, $19,000* **1990-91 EP Jul 90–Dec 90** *MT-10886*	$ 43,850/90-91	0765	**HANRAHAN, JOHN W.** *Physiology, McGill* Electrophysiology of rat medullary thick ascending limb cells **1990-91 EP Apr 90–Mar 91** *MA-9605*	$ 160,425/85-89 48,497/89-90 48,497/90-91
0758	**HAMPSON, M. ELIZABETH A.** *Psychology, Toronto* **BLAKE, JENNIFER M.** *Obstetrics and Gynecology, Toronto* **ROVET, JOANNE F.** *Pediatrics, Toronto* Aptitudes and abilities in congenital adrenal hyperplasia *1990-91 expenditure breakdown: research support, $49,571; equipment, $1,380* **1990-91 EP Jul 90–Mar 91** *MA-10876*	$ 50,951/90-91	0766	**HARDING, PAUL G.R.** *Obstetrics and Gynecology, Western Ontario* Treatment of the fetus and newborn **1990-91 EP Apr 90–Mar 91** *MT-4957*	$ 928,593/73-89 124,700/89-90 124,700/90-91
0759	**HANCOCK, ROBERT E.W.** *Microbiology, British Columbia* Use of Pseudomonas aeruginosa outer membrane proteins for immunotherapy **1990-91 EP Apr 90–Mar 91** *MA-6765*	$ 439,430/81-89 78,795/89-90 79,560/90-91	0767	**HARE, ROBERT D.** *Psychology, British Columbia* Psychopathy: assessment and biosocial correlates *MA-4511*	$ 998,859/71-89 90,877/89-90 46,795/90-91
0760	**HANCOCK, RONALD** *Biochimie, Laval* Topoisomerase II: aspects of function and structure *MA-9589*	$ 191,105/85-89 54,140/89-90 43,989/90-91	0768	**HARGREAVE, FREDERICK E.** *Medicine, McMaster* Direct studies of airway inflammation in asthma and other airway diseases **1990-91 EP Apr 90–Mar 91** *MA-9968*	$ 103,688/87-89 63,974/89-90 65,549/90-91
0761	**HANLEY, DAVID A.** *Medicine, Calgary* Studies of parathyroid hormone secretion *MA-10299*	$ 47,170/88-89 45,720/89-90 32,004/90-91	0769	**HARLEY, CALVIN B.** *Biochemistry, McMaster* Terminal differentiation of HL-60 cells **1990-91 EP Apr 90–Mar 91** *MA-10300*	$ 62,000/88-89 62,000/89-90 87,200/90-91
			0770	**HARNISH, DELSWORTH G.** *Pathology, McMaster* Mechanisms of replication of an arenavirus **1990-91 EP Apr 90–Mar 91** *MT-5471*	$ 351,791/75-89 64,328/89-90 61,434/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0771	**HARRIS, JOHN F.** *Oncology, Western Ontario* Applications of monoclonal antibodies to metastasis **1990-91 EP Apr 90–Mar 91** *MA-10723*	$ 48,803/89-90 66,404/90-91	0781	**HASTINGS, KENNETH E.M.** *Neurology and Neurosurgery, McGill* Novel transcription pattern in transgenic mice carrying multiple copies of a quail muscle gene **1990-91 EP Apr 90–Jun 90** *MA-10304*	$ 45,742/88-89 38,360/89-90 9,590/90-91
0772	**HARRIS, JOHN F.** **CHAMBERS, ANN F.** *Oncology, Western Ontario* Somatic cell genetic analysis of metastatic cells **1990-91 EP Apr 90–Mar 91** *MT-10301*	$ 50,000/88-89 50,000/89-90 54,911/90-91	0782	**HASTINGS, KENNETH E.M.** *Neurology and Neurosurgery, McGill* Developmental and neural control of troponin I gene expression in transgenic mice *1990-91 expenditure breakdown: research support, $60,169; equipment, $3,500* **1990-91 EP Apr 90–Mar 91** *MT-10303*	$ 72,224/88-89 52,509/89-90 63,669/90-91
0773	**HARRISON, JOAN E.** **HITCHMAN, ANTHONY J.W.** *Medicine, Toronto* Fluoride effects on ectopic bone formation **1990-91 EP Apr 90–Mar 91** *MT-3114*	$ 849,167/68-89 68,691/89-90 70,168/90-91	0783	**HATTORI, TOSHIAKI** *Anatomy, Toronto* Transmitter segregation within neurons **1990-91 EP Apr 90–Jun 90** *MA-10191*	$ 50,518/88-89 50,518/89-90 12,629/90-91
0774	**HARRISON, ROBERT V.** *Otolaryngology, Toronto* An animal model of Menière's disease **1990-91 EP Apr 90–Mar 91** *MA-9330*	$ 68,331/85-89 38,125/89-90 22,124/90-91	0784	**HATTORI, TOSHIAKI** *Anatomy, Toronto* Analysis of direct projection from the basal ganglia to the spinal cord **1990-91 EP Apr 90–Jun 90** *MA-10190*	$ 40,836/88-89 40,836/89-90 10,209/90-91
0775	**HARVEY, P. ROBERT C.** **STRASBERG, STEVEN M.** *Surgery, Toronto* Further studies on the nucleation defect in patients with cholesterol gallstones **1990-91 EP Apr 90–Mar 91** *MA-4491*	$ 1,282,150/71-89 125,561/89-90 129,662/90-91	0785	**HAVELE, CALLIOPI** *Microbiology, Saskatchewan* Analysis of generalized autoimmunity and lymphocyte differentiation by T cell clones of defined specificity and function **1990-91 EP Apr 90–Mar 91** *MA-10725*	$ 59,949/89-90 51,276/90-91
0776	**HARVEY, STEPHEN** *Physiology, Alberta* Parathyroid hormone regulation of pituitary function **1990-91 EP Apr 90–Mar 91** *MA-10724*	$ 36,750/89-90 49,000/90-91	0786	**HAWKES, RICHARD B.** *Anatomy, Calgary* Pattern formation in the cerebellum **1990-91 EP Apr 90–Mar 91** *MT-9107*	$ 232,691/85-89 87,890/89-90 87,890/90-91
0777	**HASLAM, RICHARD J.** *Pathology, McMaster* Signal transduction in the blood platelet: a model system in molecular pharmacology **1990-91 EP Apr 90–Mar 91** *MT-5626*	$ 1,256,341/75-89 128,173/89-90 129,418/90-91	0787	**HAY, JOHN B.** *Immunology, Toronto* Regulation of lymphocyte migration **1990-91 EP Apr 90–Mar 91** *MA-5056*	$ 704,543/73-89 68,124/89-90 68,392/90-91
0778	**HASSELL, JOHN A.** *Biology, McMaster* Polyomavirus as a model to study mammalian gene expression **1990-91 EP Apr 90–Mar 91** *MT-6198*	$ 961,918/71-89 130,000/89-90 130,000/90-91	0788	**HAYDEN, MICHAEL R.** *Medical Genetics, British Columbia* Molecular genetic investigations in Huntington's disease **1990-91 EP Apr 90–Mar 91** *MA-9133*	$ 167,402/85-89 101,188/89-90 100,600/90-91
0779	**HASSELL, JOHN A.** *Biology, McMaster* Structural and functional characterization of the polyomavirus origin for DNA replication **1990-91 EP Apr 90–Mar 91** *MT-7918*	$ 208,235/83-89 55,000/89-90 55,000/90-91	0789	**HAYES, MICHAEL A.** *Veterinary Pathology, Guelph* Post-necrotic mechanisms of cancer progression *1990-91 expenditure breakdown: research support, $53,851; equipment, $2,980* **1990-91 EP Apr 90–Mar 91** *MT-9611*	$ 116,662/85-89 37,429/89-90 56,831/90-91
0780	**HASSOUNA, MAGDY M.** *Surgery, McGill* Effect of electric stimulation of sacral roots on the outcome of post-traumatic neurogenic bladder **1990-91 EP Apr 90–Mar 91** *MT-10333*	$ 50,000/88-89 25,000/89-90 32,304/90-91			

List No.	Grant/Award	Financial History
0790	**HEATHCOTE, E. JENNY L.** *Medicine, Toronto* **BLENDIS, LAURENCE M.** *Medicine, Toronto* **MILNER, RUTH A.** *Clinical Epidemiology and Biostatistics, McMaster* **WOROBETZ, LAWRENCE J.** *Medicine, Saskatchewan* **WILLIAMS, C. NOEL** *Medicine, Dalhousie* **STEINBRECHER, URS P.** *Medicine, British Columbia* **MINUK, GERALD Y.** *Medicine, Manitoba* **GHENT, CAMERON N.** *Medicine, Western Ontario* **WANLESS, IAN R.** *Pathology, Toronto* **SCULLY, LINDA J.** *Medicine, Ottawa* **SUTHERLAND, LLOYD R.** *Medicine, Calgary* A double-blind randomized controlled multicentre trial of ursodeoxycholic acid in primary biliary cirrhosis **1990-91 EP Apr 90–Mar 91** *MA-10305*	$ 83,508/88-89 154,668/89-90 169,623/90-91
0791	**HEATON, JEREMY P.W.** *Urology, Queen's* Impotence and the effects of aging on the pharmacological response of erectile tissue **1990-91 EP Apr 90–Mar 91** *MA-10726*	$ 21,230/89-90 28,306/90-91
0792	**HEBERT, JACQUES** *Médecine, Laval* Role of idiotypic-antiidiotypic network in the regulation of antibody response to Lol p I pollen *MA-10338*	$ 67,935/88-89 60,340/89-90 26,399/90-91
0793	**HECHTMAN, PETER** *Biology, McGill* **KAPLAN, FEIGE** *Pediatrics, McGill* Characterization of Tay-Sachs disease genes in French-Canadian and other populations *1990-91 expenditure breakdown: research support, $58,676; equipment, $6,924* **1990-91 EP Jul 90–Mar 91** *MA-10975*	$ 65,600/90-91
0794	**HEIGENHAUSER, GEORGE J.F.** **JONES, NORMAN L.** *Medicine, McMaster* Muscle performance and acid-base homeostasis **1990-91 EP Apr 90–Mar 91** *MT-7675*	$ 321,663/82-89 57,551/89-90 60,689/90-91
0795	**HEISLER, SEYMOUR** *Medicine, McGill* Mechanism of action of somatostatin; paracrine action of adrenal atrial natriuretic peptide **1990-91 EP Apr 90–Mar 91** *MT-9089*	$ 537,281/85-89 118,000/89-90 118,000/90-91
0796	**HENDY, GEOFFREY N.** *Medicine, McGill* Investigation of the molecular biology of parathyroid gland activity *1990-91 expenditure breakdown: research support, $88,132; equipment, $4,941* **1990-91 EP Apr 90–Mar 91** *MT-9315*	$ 229,355/85-89 65,137/89-90 93,073/90-91
0797	**HENRY, JAMES L.** *Physiology, McGill* Physiology and pharmacology of sensory mechanisms in the spinal cord **1990-91 EP Apr 90–Mar 91** *MA-5891*	$ 455,313/76-89 68,612/89-90 61,783/90-91
0798	**HERMO, LOUIS** *Anatomy, McGill* Cell biological studies on the rat epididymis **1990-91 EP Apr 90–Mar 91** *MA-9813*	$ 77,092/87-89 49,802/89-90 47,927/90-91
0799	**HERSCOVICS, ANNETTE A.** *Biochemistry, McGill* Mechanisms of glycoprotein biosynthesis **1990-91 EP Apr 90–Mar 91** *MT-7677*	$ 492,427/82-89 78,795/89-90 102,509/90-91
0800	**HERTZ, LEIF** *Pharmacology, Saskatchewan* Metabolic interactions between astrocytes and neurons *1990-91 expenditure breakdown: research support, $84,341; equipment, $10,968* **1990-91 EP Apr 90–Mar 91** *MT-5957*	$ 854,263/77-89 77,304/89-90 95,309/90-91
0801	**HERZBERG, GENE R.** *Biochemistry, Memorial University of Newfoundland* Effects of dietary fish oils on lipid metabolism **1990-91 EP Apr 90–Mar 91** *MA-9190*	$ 152,379/85-89 49,972/89-90 52,689/90-91
0802	**HESS, ROBERT F.** *Ophthalmology, McGill* Neural dysfunction in amblyopia **1990-91 EP Sep 90–Mar 91** *MT-10818*	$ 44,000/90-91
0803	**HEW, CHOY-LEONG** *Clinical Biochemistry, Toronto* Biochemistry and molecular biology of gonadotropin and prolactin **1990-91 EP Apr 90–Mar 91** *MA-10125*	$ 42,375/88-89 56,500/89-90 56,500/90-91
0804	**HEW, CHOY-LEONG** *Clinical Biochemistry, Toronto* Biological antifreeze **1990-91 EP Apr 90–Mar 91** *MT-5627*	$ 836,444/75-89 105,000/89-90 105,000/90-91
0805	**HICKEY, DONAL A.** *Biology, Ottawa* Glucose repression of gene expression in a higher eukaryote: a molecular analysis **1990-91 EP Apr 90–Mar 91** *MA-9860*	$ 127,900/87-89 87,784/89-90 95,171/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0806	**HILL, RICHARD P.** *Medical Biophysics, Toronto* Studies of the metastatic ability of tumor cells **1990-91 EP Apr 90–Mar 91** *MA-8680*	$ 270,217/84-89 65,000/89-90 65,000/90-91	0814	**HISCOTT, JOHN** *Microbiology and Immunology, McGill* Transcriptional regulation of human interferon gene expression *1990-91 expenditure breakdown: research support, $89,968; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MT-9295*	$ 192,323/85-89 57,783/89-90 99,968/90-91
0807	**HIMMS-HAGEN, JEAN** *Biochemistry, Ottawa* **COSCINA, DONALD V.** *Psychiatry, Toronto* Central control of sympathetic nervous system in relation to thermogenesis and energy balance **1990-91 EP Apr 90–Mar 91** *MT-6847*	$ 351,382/81-89 72,081/89-90 51,524/90-91	0815	**HO, ANTHONY K.** *Physiology, Alberta* Dual receptor regulation of cyclic nucleotides: post-receptor mechanisms **1990-91 EP Jul 90–Mar 91** *MT-10870*	$ 39,743/90-91
0808	**HIMMS-HAGEN, JEAN** *Biochemistry, Ottawa* Brown adipose tissue metabolism in obesity *1990-91 expenditure breakdown: research support, $99,490; equipment, $2,000* **1990-91 EP Apr 90–Mar 91** *MT-0857*	$ 1,365,134/60-89 102,959/89-90 101,490/90-91	0816	**HOANG, TRANG K.** *Médecine, Montréal* Regulation of granulocyte-macrophage colony stimulating factor responsiveness at the receptor level **1990-91 EP avr 90–mar 91** *MT-9734*	$ 158,873/86-89 52,000/89-90 65,573/90-91
0809	**HINDMARSH, K. WAYNE** *Pharmacy, Saskatchewan* **SANKARAN, KORAVANGATTU** *Pediatrics, Saskatchewan* **GORECKI, DENNIS K.J.** *Pharmacy, Saskatchewan* Disposition of chloral hydrate in infants and children **1990-91 EP Apr 90–Mar 91** *MA-10466*	$ 29,625/89-90 39,500/90-91	0817	**HOBKIRK, RONALD** *Biochemistry, Western Ontario* Biochemistry of steroids and their sulfated forms **1990-91 EP Apr 90–Mar 91** *MT-0532*	$ 1,248,538/54-89 84,000/89-90 84,000/90-91
0810	**HINDSGAUL, OLE** *Chemistry, Alberta* Synthetic inhibitors for a metastasis-associated glycosyltransferase (GnT-V) **1990-91 EP Apr 90–Mar 91** *MA-10467*	$ 30,750/89-90 41,000/90-91	0818	**HOFFER, J. ANDRES** *Clinical Neurosciences, Calgary* Muscle proprioceptors and the control of voluntary movement **1990-91 EP Apr 90–Mar 91** *MA-10468*	$ 42,741/89-90 56,988/90-91
0811	**HINKE, JOSEPH A.** *Anatomy, Ottawa* Electron probe X-ray microanalysis of the adult mammalian myocyte **1990-91 EP Apr 90–Jun 90** *MA-10306*	$ 46,000/88-89 46,000/89-90 11,500/90-91	0819	**HOFFER, L. JOHN** *Medicine, McGill* Nutritional effects on amino acid and protein metabolism in man *1990-91 expenditure breakdown: research support, $70,573; equipment, $7,271* **1990-91 EP Apr 90–Mar 91** *MT-8725*	$ 214,652/84-89 55,984/89-90 77,844/90-91
0812	**HIRSH, JACK** *Medicine, McMaster* **BUCHANAN, MICHAEL R.** *Pathology, McMaster* **WEITZ, JEFFREY I.** *Medicine, McMaster* **OFOSU, FREDERICK A.** *Pathology, McMaster* Basic and applied studies with low molecular weight heparin and tissue plasminogen activator **1990-91 EP Apr 90–Mar 91** *MT-3992*	$ 1,404,209/70-89 147,084/89-90 148,512/90-91	0820	**HOFMANN, THEO** *Biochemistry, Toronto* Structure and function of proteins: aspartic proteinases, calbindin and pilins **1990-91 EP Apr 90–Mar 91** *MT-1982*	$ 1,891,434/66-89 155,000/89-90 155,000/90-91
0813	**HIRST, MAURICE** *Pharmacology and Toxicology, Western Ontario* The development of cardiotoxicity to ethanol in the rat *MA-10307*	$ 48,001/88-89 37,000/89-90 18,963/90-91	0821	**HOGG, DAVID** *Medicine, Toronto* The HTLV-I trans-activator tax activates a cellular enhancer binding protein **1990-91 EP Apr 90–Mar 91** *MT-10469*	$ 46,294/89-90 61,725/90-91
			0822	**HOGG, JAMES C.** *Pathology, British Columbia* Structure and function of the bronchial mucosa **1990-91 EP Apr 90–Mar 91** *MT-7246*	$ 909,356/80-89 120,574/89-90 121,744/90-91

List No.	Grant/Award	Financial History
0823	**HOGG, JAMES C.** **DOERSCHUK, CLAIRE M.** ***Pathology, British Columbia*** Structure and function of pulmonary microvasculature **1990-91 EP Apr 90–Mar 91** *MT-4219*	$ 1,317,432/71-89 128,406/89-90 131,798/90-91
0824	**HOGGE, DONNA E.** ***Medicine, British Columbia*** The role of human hemopoietic growth factors in normal and malignant cell growth *MA-10336*	$ 45,000/88-89 45,000/89-90 23,063/90-91
0825	**HOLDEN, JEANETTE J.A.** ***Psychiatry, Queen's*** **WHITE, BRADLEY N.** ***Biology, Queen's*** Analysis and isolation of DNA sequences at the fragile site at Xq27.3 in X-linked mental retardation *1990-91 expenditure breakdown: research support, $49,875; equipment, $11,500* **1990-91 EP Jul 90–Mar 91** *MT-10862*	$ 61,375/90-91
0826	**HOLLAND, F. JOHN** ***Pediatrics, Toronto*** Precocious puberty: efficacy and pharmacokinetics of a polymer-bound analogue of GnRH; biochemical and genetic basis of the familial form of precocious puberty **1990-91 EP Apr 90–Mar 91** *MA-9864*	$ 81,480/87-89 54,426/89-90 62,659/90-91
0827	**HOLLAND, G. REX** ***Dentistry, Alberta*** Oral nerves and their response to damage **1990-91 EP Apr 90–Mar 91** *MA-9681*	$ 183,819/86-89 74,290/89-90 74,290/90-91
0828	**HOLLAND, PAUL C.** ***Neurology and Neurosurgery, McGill*** Biosynthesis of membrane proteins during myogenesis **1990-91 EP Apr 90–Mar 91** *MT-5741*	$ 520,318/75-89 63,036/89-90 73,973/90-91
0829	**HOLLENBERG, CHARLES H.** **KIRKLAND, JAMES L.** ***Medicine, Toronto*** Adipocyte precursor characteristics and growth of adipose tissue *1990-91 expenditure breakdown: research support, $78,000; equipment, $10,273* **1990-91 EP Apr 90–Mar 91** *MT-7679*	$ 377,435/82-89 60,000/89-90 88,273/90-91
0830	**HOLLENBERG, MORLEY D.** ***Pharmacology and Therapeutics, Calgary*** Membrane receptors and hormone action **1990-91 EP Apr 90–Mar 91** *MT-6859*	$ 803,607/81-89 135,182/89-90 149,535/90-91
0831	**HOLOWACHUK, EUGENE W.** ***Banting and Best Department of Medical Research, Toronto*** Transcriptional regulation studies of the insulin receptor gene and class II histocompatibility genes **1990-91 EP Apr 90–Jun 90** *MA-8745*	$ 208,751/84-89 50,635/89-90 12,659/90-91
0832	**HOLUB, BRUCE J.** ***Nutritional Sciences, Guelph*** Phospholipid metabolism in human platelets **1990-91 EP Apr 90–Mar 91** *MT-7680*	$ 347,979/82-89 77,417/89-90 78,168/90-91
0833	**HOPKINS, DAVID A.** ***Anatomy, Dalhousie*** Anatomical and functional studies of descending subcortical projections and visceral innervation *1990-91 expenditure breakdown: research support, $62,842; equipment, $6,984* **1990-91 EP Apr 90–Mar 91** *MT-7369*	$ 488,961/80-89 61,848/89-90 69,826/90-91
0834	**HORACEK, B. MILAN** ***Physiology and Biophysics, Dalhousie*** **GREGSON, PETER H.** ***Electrical Engineering, Technical University of Nova Scotia*** **CLEMENTS, JOHN C.** ***Mathematics, Dalhousie*** **MURPHY, DAVID A.** ***Surgery, Dalhousie*** **MACDONALD, ROBERT G.** ***Medicine, Dalhousie*** Advancement of cardiac potential mapping **1990-91 EP Apr 90–Mar 91** *MA-10413*	$ 66,086/89-90 68,851/90-91
0835	**HORACKOVA, MAGDA** ***Physiology and Biophysics, Dalhousie*** Excitation-contraction coupling in cardiac muscle: electrophysiological studies of isolated myocytes **1990-91 EP Apr 90–Mar 91** *MT-4128*	$ 508,857/70-89 58,374/89-90 58,941/90-91
0836	**HORE, JONATHAN** ***Physiology, Western Ontario*** Cerebellar function in normal and ataxic movements **1990-91 EP Apr 90–Mar 91** *MT-6773*	$ 288,652/81-89 62,483/89-90 62,483/90-91
0837	**HOUDE, DANIEL** ***Médecine nucléaire et radiobiologie, Sherbrooke*** Implantation d'une installation laser à l'échelle femtoseconde: études spectroscopiques de processus physico-chimiques transitoires d'intérêt biologique (phase 2) *1990-91 ventilation des dépenses: aide à la recherche, $69,000; appareils, $170,000* **1990-91 EP jlt 90–mar 91** *MA-11089*	$ 239,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0838	**HOWARD, S. PETER** ***Basic Medical Sciences, Memorial University of Newfoundland*** Posttranslational modification, assembly and function of the colicin A lysis protein **1990-91 EP Apr 90–Mar 91** *MT-10470*	$ 35,747/89-90 47,662/90-91
0839	**HOWLETT, SUSAN E.** ***Pharmacology, Dalhousie*** Calcium handling in cardiomyopathic and aging heart *1990-91 expenditure breakdown: research support, $29,850; equipment, $15,000* **1990-91 EP Jul 90–Mar 91** *MT-10970*	$ 44,850/90-91
0840	**HOZUMI, NOBUMICHI** ***Immunology, Toronto*** A molecular analysis of immunoregulation in an antigen-specific immune response **1990-91 EP Apr 90–Mar 91** *MT-7247*	$ 853,504/80-89 155,000/89-90 155,000/90-91
0841	**HRDINA, PAVEL D.** ***Pharmacology, Ottawa*** Recognition sites for antidepressants and the serotonergic system in rat and human brain and platelets *1990-91 expenditure breakdown: research support, $44,523; equipment, $35,267* **1990-91 EP Apr 90–Mar 91** *MT-9356*	$ 127,384/85-89 37,051/89-90 79,790/90-91
0842	**HSIANG, YORK N.-H.** ***Surgery, British Columbia*** Photodynamic therapy of atherosclerosis *1990-91 expenditure breakdown: research support, $32,250; equipment, $35,000* **1990-91 EP Jul 90–Mar 91** *MA-11020*	$ 67,250/90-91
0843	**HUDSON, ARTHUR J.** **EBERS, GEORGE C.** ***Clinical Neurological Sciences, Western Ontario*** Anonymous and candidate loci in paramyotonia congenita **1990-91 EP Apr 90–Mar 91** *MT-10471*	$ 39,821/89-90 53,094/90-91
0844	**HUDSON, ROBERT J.** ***Anesthesia, Manitoba*** Midazolam-alfentanil anesthesia for abdominal aortic surgery **1990-91 EP Apr 90–Mar 91** *MA-10472*	$ 34,429/89-90 38,285/90-91
0845	**HUET, P.-MICHEL** ***Médecine, Montréal*** Physiopathologie des lésions hépatiques secondaires à l'ischémie-reperfusion **1990-91 EP jlt 90–sep 90** *MT-11079*	$ 31,769/90-91
0846	**HUET, P.-MICHEL** ***Médecine, Montréal*** Etude de la microcirculation hépatique **1990-91 EP avr 90–mar 91** *MT-7280*	$ 637,306/80-89 80,000/89-90 80,000/90-91

N° de liste	Subvention/Bourse	Résumé financier
0847	**HUFF, MURRAY W.** ***Medicine, Western Ontario*** Metabolism of apolipoproteins B, C and E in man **1990-91 EP Apr 90–Mar 91** *MA-8014*	$ 206,834/83-89 47,311/89-90 53,069/90-91
0848	**HULBERT, WILLIAM C.** ***Medicine, Alberta*** Mechanism of cellular exfoliation and modulators of initial repair *MA-10308*	$ 48,200/88-89 44,700/89-90 19,556/90-91
0849	**HUMPHRIES, R. KEITH** ***Medicine, British Columbia*** Regulatory genes active in primitive hemopoietic cells **1990-91 EP Apr 90–Jun 90** *MA-9255*	$ 210,634/85-89 49,419/89-90 11,628/90-91
0850	**HUMPHRIES, R. KEITH** ***Medicine, British Columbia*** Cloning and characterization of hemopoietic cell surface regulatory molecules **1990-91 EP Jul 90–Mar 91** *MT-10837*	$ 59,145/90-91
0851	**HUNT, JOHN W.** **HILL, RICHARD P.** ***Medical Biophysics, Toronto*** Basic studies of hyperthermia **1990-91 EP Apr 90–Mar 91** *MT-1043*	$ 1,031,167/61-89 71,610/89-90 73,380/90-91
0852	**HUNTER, GRAEME K.** ***Dentistry, Alberta*** Regulation of cartilage calcification **1990-91 EP Apr 90–Mar 91** *MA-9806*	$ 75,195/86-89 40,477/89-90 42,756/90-91
0853	**HUNTER, GRAEME K.** ***Dentistry, Alberta*** Matrix-mineral interactions in bone mineralization *MA-7937*	$ 163,450/85-89 46,995/89-90 38,184/90-91
0854	**HUNTER, IAN W.** ***Biomedical Engineering, McGill*** Investigation of single muscle cell mechanics using a novel laser scanning microscope and micro-robots **1990-91 EP Apr 90–Mar 91** *MA-8547*	$ 245,991/84-89 138,847/89-90 91,675/90-91
0855	**HUSSAIN, SABAH N.A.** ***Medicine, McGill*** Respiratory muscle blood flow *1990-91 expenditure breakdown: research support, $32,030; equipment, $13,870* **1990-91 EP Jul 90–Mar 91** *MA-11011*	$ 45,900/90-91
0856	**HYDE, MARTYN L.** ***Otolaryngology, Toronto*** Digital signal processing of auditory brainstem responses **1990-91 EP Apr 90–Jun 90** *MA-7682*	$ 150,262/82-89 29,175/89-90 7,294/90-91

List No.	Grant/Award	Financial History
0857	**IATROU, KOSTAS** ***Medical Biochemistry, Calgary*** The chorion of Bombyx mori as a model system for the study of organization, expression and evaluation of eukaryotic multigene families **1990-91 EP Apr 90–Mar 91** *MT-6777*	$ 445,020/81-89 81,527/89-90 82,318/90-91
0858	**INGLES, C. JAMES** ***Banting and Best Department of Medical Research, Toronto*** Molecular genetics of eukaryotic RNA polymerase II **1990-91 EP Apr 90–Mar 91** *MT-4649*	$ 914,452/71-89 124,000/89-90 139,600/90-91
0859	**INMAN, ROBERT D.** ***Medicine, Toronto*** Clonal analysis of synovial fluid T cell specificities in reactive arthritis **1990-91 EP Jul 90–Mar 91** *MT-11021*	$ 46,500/90-91
0860	**INNIS, SHEILA M.** ***Pediatrics, British Columbia*** Development of hepatic cholesterol metabolism **1990-91 EP Apr 90–Mar 91** *MA-8061*	$ 167,764/83-89 41,189/89-90 44,039/90-91
0861	**ISCOE, STEVEN D.** ***Physiology, Queen's*** Lung volume and regulation of respiration **1990-91 EP Apr 90–Mar 91** *MT-6347*	$ 295,405/78-89 40,811/89-90 44,573/90-91
0862	**ISCOVE, NORMAN N.** ***Medical Biophysics, Toronto*** Physiology and molecular genetics of hemopoietic stem cells **1990-91 EP Apr 90–Mar 91** *MT-10176*	$ 54,000/88-89 54,000/89-90 78,150/90-91
0863	**ISENMAN, DAVID E.** ***Biochemistry, Toronto*** Structural basis for functional site expression in complement components C3 and C4 **1990-91 EP Apr 90–Mar 91** *MT-7081*	$ 485,002/79-89 75,193/89-90 66,999/90-91
0864	**ISRAEL, YEDY** ***Pharmacology, Toronto*** **ORREGO, HECTOR** ***Medicine, Toronto*** Alcohol-induced alterations of hepatic glutathione metabolism **1990-91 EP Apr 90–Mar 91** *MT-8928*	$ 168,726/84-89 39,700/89-90 39,700/90-91
0865	**ISRAELS, SARA J.** **GERRARD, JONATHAN M.** ***Pediatrics and Child Health, Manitoba*** Investigation of platelet dense granule secretion in a cell-free system *MA-10310*	$ 30,404/88-89 30,404/89-90 15,582/90-91

N° de liste	Subvention/Bourse	Résumé financier
0866	**ISSEKUTZ, ANDREW C.** ***Pediatrics, Dalhousie*** Inflammatory reaction and macrophage cytokines **1990-91 EP Apr 90–Mar 91** *MT-7684*	$ 405,170/82-89 68,289/89-90 79,386/90-91
0867	**ISSEKUTZ, THOMAS B.** ***Pediatrics, Dalhousie*** Mononuclear leukocyte infiltration in chronic inflammatory reactions **1990-91 EP Apr 90–Mar 91** *MA-8575*	$ 238,817/84-89 74,655/89-90 84,348/90-91
0868	**IWAZUMI, TATSUO** ***Medical Physiology, Calgary*** Lateral forces and elasticities of single sarcomeres **1990-91 EP Apr 90–Aug 90** *MT-10311*	$ 61,890/88-89 45,000/89-90 17,979/90-91
0869	**IYER, VENKATRAM N.** ***Biology, Carleton*** Conjugative antibiotic-resistance plasmids (group N) **1990-91 EP Apr 90–Mar 91** *MA-6932*	$ 327,416/81-89 53,781/89-90 55,447/90-91
0870	**JACKOWSKI, GEORGE** ***Clinical Biochemistry, Toronto*** Gene regulation in the differentiating myocardial cell *MA-10312*	$ 56,540/88-89 56,540/89-90 28,977/90-91
0871	**JACKSON, ALAN C.** ***Medicine, Queen's*** Clinical and experimental rabies **1990-91 EP Apr 90–Mar 91** *MA-10068*	$ 95,075/87-89 55,397/89-90 48,656/90-91
0872	**JACOBS, J. ROGER** ***Biology, McMaster*** Genetic dissection of neuron-glia communication *1990-91 expenditure breakdown: research support, $29,748; equipment, $12,147* **1990-91 EP Jul 90–Mar 91** *MT-10820*	$ 41,895/90-91
0873	**JACOBSON, WILLIAM** ***Obstetrics and Gynecology, Toronto*** Steroid and neurotransmitter receptors in puberty *1990-91 expenditure breakdown: research support, $40,773; equipment, $4,278* **1990-91 EP Jul 90–Mar 91** *MA-10911*	$ 45,051/90-91
0874	**JAMALI, FAKHREDDIN** ***Pharmacy and Pharmaceutical Sciences, Alberta*** **RUSSELL, ANTHONY S.** ***Medicine, Alberta*** Stereoselective pharmacokinetics of certain non-steroidal antiinflammatory drugs **1990-91 EP Apr 90–Mar 91** *MA-9569*	$ 128,890/85-89 39,421/89-90 39,641/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
0875	**JAWORSKI, MARTINE A.** *Medicine, Ottawa* Immunogenetics of diabetes mellitus in Old Colony Mennonites **1990-91 EP Jul 90–Mar 91** *MA-10973*	$ 41,261/90-91
0876	**JEEJEEBHOY, KHURSHEED N.** **ALLARD, JOHANE P.** *Medicine, Toronto* Short-chain fatty acids as a source of energy in short bowel syndrome *1990-91 expenditure breakdown: research support, $71,460; equipment, $8,400* **1990-91 EP Apr 90–Mar 91** *MA-3204*	$ 897,540/68-89 78,765/89-90 79,860/90-91
0877	**JEEJEEBHOY, KHURSHEED N.** *Medicine, Toronto* **ARMSTRONG, ROBIN L.** *Physics, Toronto* Mechanistic studies of the effect of nutrient deprivation and refeeding on skeletal muscle function **1990-91 EP Jul 90–Mar 91** *MT-10885*	$ 77,204/90-91
0878	**JEEJEEBHOY, KHURSHEED N.** *Medicine, Toronto* **ARMSTRONG, ROBIN L.** *Physics, Toronto* Mechanistic studies of the effect of malnutrition on muscle function **1990-91 EP Apr 90–Jun 90** *MA-9814*	$ 91,495/87-89 44,441/89-90 10,457/90-91
0879	**JELLINCK, PETER H.** *Biochemistry, Queen's* Regulation of estrogen action **1990-91 EP Apr 90–Mar 91** *MT-7688*	$ 793,261/69-89 57,169/89-90 56,412/90-91
0880	**JENNINGS, DONALD B.** *Physiology, Queen's* Mechanisms of respiratory regulation of PCO2: electrolytes, osmolality and hormones affecting water and electrolyte balance **1990-91 EP Apr 90–Mar 91** *MT-5443*	$ 638,495/75-89 80,000/89-90 80,000/90-91
0881	**JHAMANDAS, JACK H.** *Medicine, Alberta* Electrophysiological characterization of central cardiovascular pathways in the rat **1990-91 EP Apr 90–Mar 91** *MT-10473*	$ 36,405/89-90 48,540/90-91
0882	**JHAMANDAS, KHEM H.** *Pharmacology and Toxicology, Queen's* Pharmacology of opioid and enkephalin action on the release of neurotransmitters **1990-91 EP Apr 90–Mar 91** *MT-5960*	$ 605,703/76-89 116,056/89-90 83,692/90-91
0883	**JIMBOW, KOWICHI** *Medicine, Alberta* Structure and function of melanosomes in melanocytes **1990-91 EP Apr 90–Mar 91** *MT-10264*	$ 70,000/88-89 70,000/89-90 71,749/90-91
0884	**JIRIK, FRANK R.** *Medicine, British Columbia* Models of immunological tolerance and autoimmunity in transgenic mice **1990-91 EP Jul 90–Mar 91** *MT-10989*	$ 54,762/90-91
0885	**JOFFE, RUSSELL T.** *Psychiatry, Toronto* **SINGER, WILLIAM** *Medicine, Toronto* **BROWN, GREGORY M.** *Biomedical Sciences, McMaster* The thyroid and depression: relationship to melatonin **1990-91 EP Apr 90–Mar 91** *MA-10184*	$ 30,000/88-89 30,000/89-90 24,919/90-91
0886	**JOHNSON, DAVID C.** *Pathology, McMaster* Role of membrane glycoproteins in immune surveillance of herpes simplex virus infections **1990-91 EP Apr 90–Mar 91** *MA-8634*	$ 223,088/84-89 58,268/89-90 66,537/90-91
0887	**JOHNSON, DENNIS D.** **TUCHEK, JOHN M.** *Pharmacology, Saskatchewan* Neurochemistry and neuropharmacology of epileptic fowl **1990-91 EP Apr 90–Mar 91** *MA-8604*	$ 170,107/84-89 36,806/89-90 40,718/90-91
0888	**JOHNSTON, C. CELESTE** *Nursing, McGill* **FAUCHER, DANIEL J.** *Pediatrics, McGill* **ARANDA, JACOB V.** *Pediatrics, McGill* **COLLINGE, JUDITH M.** *Nursing, McGill* Measurement and management of pain in neonates *1990-91 expenditure breakdown: research support, $39,675; equipment, $43,475* **1990-91 EP Jul 90–Mar 91** *MT-10836*	$ 83,150/90-91
0889	**JOHNSTON, CHARLOTTE** *Psychology, British Columbia* The efficacy of parent training in the treatment of attention deficit and hyperactivity disorder *1990-91 expenditure breakdown: research support, $24,150; equipment, $1,000* **1990-91 EP Jul 90–Mar 91** *MA-10921*	$ 25,150/90-91
0890	**JOHNSTON, GERALD C.** *Microbiology, Dalhousie* **SINGER, RICHARD A.** *Biochemistry, Dalhousie* Control of cell proliferation **1990-91 EP Apr 90–Mar 91** *MT-5776*	$ 854,416/76-89 104,500/89-90 104,500/90-91

N° de liste	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
0891	**JOHNSTON, JAMES B.** *Medicine, Manitoba* **ISRAELS, LYONEL G.** *Medicine, Manitoba* **GOLDENBERG, GERALD J.** *Medicine, Manitoba* **BEGLEITER, ASHER** *Medicine, Manitoba* **MOWAT, MICHAEL R.A.** *Physiology, Manitoba* Biology and pharmacology of chronic lymphocytic leukemia **1990-91 EP Apr 90–Mar 91** *MA-9974*	$ 105,000/87-89 66,275/89-90 70,050/90-91
0892	**JOHNSTON, K. WAYNE** *Surgery, Toronto* **COBBOLD, RICHARD S.C.** *Biomedical Engineering, Toronto* Fundamental studies of Doppler ultrasound **1990-91 EP Apr 90–Mar 91** *MA-7924*	$ 324,048/83-89 73,779/89-90 74,495/90-91
0893	**JOHNSTON, MILES G.** *Pathology, Toronto* Studies of the lymphatic circulation in inflammation and shock *1990-91 expenditure breakdown: research support, $60,734; equipment, $10,275* **1990-91 EP Apr 90–Mar 91** *MA-7925*	$ 270,926/83-89 53,941/89-90 71,009/90-91
0894	**JOHNSTONE, ROSE M.** *Biochemistry, McGill* Membrane remodelling during development and purification of transport systems **1990-91 EP Apr 90–Mar 91** *MT-1984*	$ 1,254,051/66-89 137,883/89-90 137,052/90-91
0895	**JOLICOEUR, FRANCOIS B.** *Psychiatrie, Sherbrooke* Neuropharmacologie comportementale de la neurotensine **1990-91 EP avr 90–mar 91** *MT-9101*	$ 118,600/85-89 40,800/89-90 40,800/90-91
0896	**JOLICOEUR, PAUL** *Institut de recherches cliniques de Montréal* Oncogenes and the interaction of retroviruses with the host **1990-91 EP avr 90–mar 91** *MT-5814*	$ 902,738/76-89 120,000/89-90 120,000/90-91
0897	**JOLICOEUR, PAUL** *Institut de recherches cliniques de Montréal* Molecular studies on human immunodeficiency virus **1990-91 EP avr 90–mar 91** *MT-10313*	$ 91,348/88-89 68,768/89-90 68,768/90-91
0898	**JOLICOEUR, PAUL** *Institut de recherches cliniques de Montréal* Molecular studies of neurotropic viruses **1990-91 EP avr 90–mar 91** *MT-7926*	$ 240,154/83-89 52,530/89-90 69,536/90-91

N° de liste	Subvention/Bourse	Résumé financier
0899	**JOLIVET, JACQUES** **BELANGER, KARL** *Médecine, Montréal* The biochemical pharmacology of methotrexate and leucovorin **1990-91 EP avr 90–mar 91** *MA-9483*	$ 155,046/86-89 58,000/89-90 58,000/90-91
0900	**JONES, BARBARA E.** *Neurology and Neurosurgery, McGill* Mechanisms of the sleep-waking cycle **1990-91 EP Apr 90–Mar 91** *MT-6464*	$ 509,463/78-89 57,539/89-90 61,003/90-91
0901	**JONES, DOUGLAS L.** *Physiology, Western Ontario* **KLEIN, GEORGE J.** *Medicine, Western Ontario* Cardiac arrhythmia management: defibrillation mechanisms and therapy **1990-91 EP Apr 90–Mar 91** *MT-7208*	$ 405,820/80-89 74,621/89-90 75,346/90-91
0902	**JONES, GLENVILLE** *Medicine, Queen's* Side-chain hydroxylation of vitamin D, vitamin D receptors and retinoids **1990-91 EP Apr 90–Mar 91** *MA-9475*	$ 250,783/86-89 109,646/89-90 98,434/90-91
0903	**JONES, LYNETTE A.** *Physical and Occupational Therapy, McGill* Studies of the human proprioceptive system and its sensitivity to stiffness and inertia **1990-91 EP Apr 90–Mar 91** *MA-9969*	$ 72,500/87-89 51,971/89-90 34,231/90-91
0904	**JONES, NORMAN L.** *Medicine, McMaster* Exercise impairment in respiratory disorders **1990-91 EP Apr 90–Mar 91** *MA-7860*	$ 419,277/82-89 70,916/89-90 71,604/90-91
0905	**JONES-GOTMAN, MARILYN** **ZATORRE, ROBERT J.** *Neurology and Neurosurgery, McGill* Human olfactory function after focal cerebral excision *1990-91 expenditure breakdown: research support, $43,741; equipment, $3,500* **1990-91 EP Apr 90–Mar 91** *MT-10314*	$ 27,000/88-89 22,000/89-90 47,241/90-91
0906	**JONGSTRA, JAN** *Immunology, Toronto* The role of the LSP1 protein in the B-cell antigen receptor signaling pathway *1990-91 expenditure breakdown: research support, $45,000; equipment, $4,000* **1990-91 EP Jul 90–Mar 91** *MA-11007*	$ 49,000/90-91
0907	**JONGSTRA, JAN** *Immunology, Toronto* Gene expression in early mouse B lymphocytes *1990-91 expenditure breakdown: research support, $74,661; equipment, $5,000* **1990-91 EP Apr 90–Mar 91** *MT-10192*	$ 61,200/88-89 55,000/89-90 79,661/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0908	**JORDAN, LARRY M.** *Physiology, Manitoba* Brainstem and spinal cord mechanisms for initiation of locomotion **1990-91 EP Apr 90–Mar 91** *MT-4879*	$ 703,992/72-89 109,104/89-90 104,931/90-91	0917	**JULIUS, MICHAEL H.** *Microbiology and Immunology, McGill* The analysis of cellular and molecular events limiting T cell dependent B cell activation **1990-91 EP Apr 90–Mar 91** *MA-9735*	$ 358,447/86-89 98,000/89-90 98,000/90-91
0909	**JORDANA, MANEL** *Pathology, McMaster* Studies on the cellular and molecular basis of chronic airflow limitation **1990-91 EP Jul 90–Mar 91** *MA-11015*	$ 38,492/90-91	0918	**JURILOFF, DIANA M.** **HARRIS, MURIEL J.** *Medical Genetics, British Columbia* Developmental genetic studies in mice **1990-91 EP Apr 90–Mar 91** *MA-6766*	$ 499,932/83-89 103,750/89-90 108,872/90-91
0910	**JORGENSEN, ANNELISE O.** *Anatomy, Toronto* Biogenesis of the sarcoplasmic reticulum in muscle cells **1990-91 EP Apr 90–Mar 91** *MT-6463*	$ 545,874/78-89 102,727/89-90 102,727/90-91	0919	**KAKO, KYOHEI J.** *Physiology, Ottawa* Effects of oxidants on cardiomyocytes: H2O2-induced mitochondrial dysfunction **1990-91 EP Apr 90–Mar 91** *MA-10474*	$ 45,772/89-90 54,362/90-91
0911	**JOTHY, SERGE** *Pathology, McGill* Pathology of human colorectal cancer: functional role of carcinoembryonic antigen *1990-91 expenditure breakdown: research support, $67,785; equipment, $752* **1990-91 EP Apr 90–Mar 91** *MT-10315*	$ 50,669/88-89 44,654/89-90 68,537/90-91	0920	**KALANT, NORMAN** *Medicine, McGill* **BREM, STEVEN** *Neurology and Neurosurgery, McGill* Angiogenesis in atherogenesis: characterization and cellular mechanisms of action of smooth muscle cell-derived endothelial cell growth factor *1990-91 expenditure breakdown: research support, $50,369; equipment, $4,722* **1990-91 EP Jul 90–Mar 91** *MA-10976*	$ 55,091/90-91
0912	**JOY, MICHAEL L.G.** *Biomedical Engineering, Toronto* **HENKELMAN, R. MARK** *Medical Biophysics, Toronto* In vivo current density imaging *MA-10316*	$ 55,550/88-89 49,550/89-90 25,394/90-91	0921	**KALNINS, VITAUTS I.** *Anatomy, Toronto* Centrosomes and organization of cytoskeleton in astrocytes and endothelial cells **1990-91 EP Apr 90–Mar 91** *MT-3302*	$ 1,003,858/68-89 113,749/89-90 115,775/90-91
0913	**JOYNER, ALEXANDRA L.** *Medical Genetics, Toronto* Mammalian engrailed genes: studies of their spatially regulated expression in the developing brain **1990-91 EP Apr 90–Mar 91** *MA-9678*	$ 228,737/86-89 108,679/89-90 108,679/90-91	0922	**KALOUSEK, DAGMAR K.** *Pathology, British Columbia* Confined placental tissue mosaicism **1990-91 EP Apr 90–Mar 91** *MA-10174*	$ 51,631/88-89 47,000/89-90 48,070/90-91
0914	**JUGDUTT, BODH I.** *Medicine, Alberta* Preservation of myocardium, geometry and function during healing after myocardial infarction *1990-91 expenditure breakdown: research support, $61,059; equipment, $900* **1990-91 EP Apr 90–Mar 91** *MT-8111*	$ 292,679/83-89 57,028/89-90 61,959/90-91	0923	**KALOW, WERNER** *Pharmacology, Toronto* **KADAR, DEZSO** *Pharmacology, Toronto* **INABA, TADANOBU** *Pharmacology, Toronto* **MAHON, WILLIAM** *Medicine, Toronto* Genetic variation of drug biotransformation in man **1990-91 EP Apr 90–Mar 91** *MT-4763*	$ 1,336,489/72-89 143,165/89-90 133,104/90-91
0915	**JULIEN, JEAN-PIERRE** *Neurology and Neurosurgery, McGill* Regulation and function of neurofilament gene expression **1990-91 EP Apr 90–Mar 91** *MA-9865*	$ 138,273/86-89 59,969/89-90 60,831/90-91	0924	**KAN, FREDERICK W.K.** *Anatomie, Montréal* Structure-function relationships in gamete interaction **1990-91 EP jlt 90–mar 91** *MT-10904*	$ 50,662/90-91
0916	**JULIUS, MICHAEL H.** *Microbiology and Immunology, McGill* The analysis of molecular mechanisms of transmembrane signalling through membrane immunoglobulins **1990-91 EP Apr 90–Mar 91** *MA-10727*	$ 44,000/89-90 56,000/90-91			

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0925	**KANFER, JULIAN N.** ***Biochemistry and Molecular Biology, Manitoba*** Modification of the polar head group of membrane phospholipids by the base exchange enzymes and phospholipase D **1990-91 EP Apr 90–Mar 91** *MT-6778*	$ 483,468/81-89 69,297/89-90 69,970/90-91	0934	**KATES, MORRIS** ***Biochemistry, Ottawa*** Biosynthesis and metabolism of isoprenoid compounds in archaebacteria (halophiles and methanogens) **1990-91 EP Apr 90–Jun 90** *MT-4103*	$ 856,506/70-89 78,795/89-90 19,890/90-91
0926	**KANFER, JULIAN N.** ***Biochemistry and Molecular Biology, Manitoba*** Lipid methylations: the coupling of the base exchange reactions to phospholipid N-methylation **1990-91 EP Apr 90–Mar 91** *MA-7694*	$ 313,839/82-89 50,000/89-90 50,000/90-91	0935	**KATZ, SIDNEY** ***Pharmaceutical Sciences, British Columbia*** Concerted kinase regulation of cardiac function *MA-10285*	$ 51,126/88-89 48,126/89-90 24,664/90-91
0927	**KANG, C. YONG** ***Microbiology and Immunology, Ottawa*** Defective interfering virions and molecular mechanism of autointerference **1990-91 EP Apr 90–Mar 91** *MA-7696*	$ 518,412/82-89 78,000/89-90 78,000/90-91	0936	**KAUFMAN, SUSAN E.** ***Medicine, Alberta*** Mechanisms by which atrial stretch contributes to fluid and electrolyte homeostasis *1990-91 expenditure breakdown: research support, $53,752; equipment, $10,662* **1990-91 EP Apr 90–Mar 91** *MA-7085*	$ 349,994/79-89 50,432/89-90 64,414/90-91
0928	**KARDAMI, ELISSAVET** ***Physiology, Manitoba*** Myocardial regeneration *MA-10265*	$ 64,660/88-89 51,660/89-90 26,476/90-91	0937	**KEARNEY, ROBERT E.** **HUNTER, IAN W.** ***Biomedical Engineering, McGill*** Identification of non-linear, time-varying neuromuscular dynamics during movements *1990-91 expenditure breakdown: research support, $99,046; equipment, $60,000* **1990-91 EP Apr 90–Mar 91** *MT-7927*	$ 312,422/83-89 77,852/89-90 139,046/90-91
0929	**KARINO, TAKESHI** ***Medicine, McGill*** Role of fluid mechanical factors in thrombosis and atherosclerosis **1990-91 EP Apr 90–Mar 91** *MT-7084*	$ 336,803/79-89 42,343/89-90 42,100/90-91	0938	**KEHL, STEVEN J.** ***Physiology, British Columbia*** Dopamine-induced conductance changes in mammalian pituitary cells *1990-91 expenditure breakdown: research support, $30,150; equipment, $7,000* **1990-91 EP Jul 90–Mar 91** *MA-10971*	$ 37,150/90-91
0930	**KARMAZYN, MORRIS** ***Pharmacology and Toxicology, Western Ontario*** Na/H exchange in cardiac injury **1990-91 EP Apr 90–Mar 91** *MT-10284*	$ 58,552/88-89 45,552/89-90 51,647/90-91	0939	**KELLY, PAUL A.** ***Medicine, McGill*** Molecular mechanisms of hormone action **1990-91 EP Apr 90–Mar 91** *MT-7928*	$ 990,314/83-89 176,654/89-90 184,748/90-91
0931	**KARPATI, GEORGE** ***Neurology and Neurosurgery, McGill*** Dystrophin expression in mosaic muscle fibers *1990-91 expenditure breakdown: research support, $53,894; equipment, $1,600* **1990-91 EP Apr 90–Mar 91** *MT-5366*	$ 358,037/74-89 46,952/89-90 55,494/90-91	0940	**KELTON, JOHN G.** ***Pathology, McMaster*** The interaction of IgG with platelets and red cells and the subsequent interaction of the IgG-cell complex with cells of the reticuloendothelial cell system **1990-91 EP Apr 90–Mar 91** *MA-7150*	$ 533,485/79-89 89,679/89-90 90,590/90-91
0932	**KASTING, NORMAN W.** ***Physiology, British Columbia*** Neuroendocrinology of arginine vasopressin as assessed by models of fever, antipyresis and hibernation **1990-91 EP Apr 90–Mar 91** *MT-7972*	$ 241,501/83-89 44,202/89-90 50,457/90-91	0941	**KENG, TERESA** ***Microbiology and Immunology, McGill*** Molecular genetics of heme biosynthesis in Saccharomyces cerevisiae **1990-91 EP Apr 90–Mar 91** *MA-10010*	$ 113,000/87-89 65,518/89-90 63,236/90-91
0933	**KASTRUKOFF, LORNE F.** ***Medicine, British Columbia*** A murine model of HSV1 induced latent infection of the nervous system *MA-9742*	$ 105,584/86-89 42,607/89-90 21,836/90-91	0942	**KENNEDY, THOMAS G.** ***Obstetrics and Gynecology, Western Ontario*** Blastocyst implantation and uterine decidualization **1990-91 EP Apr 90–Mar 91** *MA-10414*	$ 127,066/89-90 177,802/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0943	**KEOUGH, KEVIN M.W.** *Biochemistry, Memorial University of Newfoundland* Molecular organization and function in membranes **1990-91 EP Apr 90–Mar 91** *MT-6936*	$ 328,662/81-89 52,929/89-90 54,081/90-91	0952	**KHANDELWAL, RAMJI L.** *Biochemistry, Saskatchewan* The regulation of glycogen metabolism in liver *1990-91 expenditure breakdown: research support, $99,422; equipment, $11,438* **1990-91 EP Apr 90–Mar 91** *MT-5633*	$ 805,755/75-89 99,807/89-90 110,860/90-91
0944	**KEOUGH, KEVIN M.W.** *Biochemistry, Memorial University of Newfoundland* Molecular organization and function in lung surfactant **1990-91 EP Apr 90–Mar 91** *MA-9361*	$ 267,064/85-89 78,480/89-90 79,242/90-91	0953	**KHATTER, JAGDISH C.** *Medicine, Manitoba* Purification and characterization of endogenous digitalis-like substances from cardiac tissue *MA-8641*	$ 207,339/84-89 47,029/89-90 24,103/90-91
0945	**KERBEL, ROBERT S.** *Medical Genetics, Toronto* Interplay and interrelationships of chemotherapeutic drugs, multidrug resistance and metastasis **1990-91 EP Apr 90–Mar 91** *MT-5815*	$ 579,566/76-89 77,744/89-90 81,783/90-91	0954	**KIBERD, BRYCE A.** *Medicine, Queen's* Murine lupus nephritis *1990-91 expenditure breakdown: research support, $43,956; equipment, $13,615* **1990-91 EP Apr 90–Mar 91** *MT-10266*	$ 56,000/88-89 43,000/89-90 57,571/90-91
0946	**KERRIGAN, CAROLYN L.** *Surgery, McGill* Surgical flaps: ischemia reperfusion injury and vascular thrombosis *1990-91 expenditure breakdown: research support, $56,278; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MA-7240*	$ 367,431/80-89 49,619/89-90 66,278/90-91	0955	**KILLIAN, KIERAN J.** **CAMPBELL, E.J. MORAN** *Medicine, McMaster* Sensory aspects of breathing **1990-91 EP Apr 90–Mar 91** *MT-6333*	$ 299,338/83-89 69,745/89-90 69,745/90-91
0947	**KETIS, NIKA V.** *Anatomy, Queen's* Dynamics of endothelial injury and regeneration *MA-10286*	$ 77,284/88-89 43,045/89-90 30,131/90-91	0956	**KILLINGER, DONALD W.** *Medicine, Toronto* Androgen metabolism and body fat distribution **1990-91 EP Apr 90–Mar 91** *MT-10287*	$ 41,000/88-89 41,000/89-90 43,100/90-91
0948	**KHALIL, M. WAHID** *Obstetrics and Gynecology, Western Ontario* Naturally occurring 19-norsteroids **1990-91 EP Apr 90–Mar 91** *MA-10423*	$ 44,536/89-90 59,381/90-91	0957	**KIM, RYUNGSOON S.** *Pharmacology and Therapeutics, Manitoba* Endogenous calcium ionophores with cardiac action **1990-91 EP Apr 90–Mar 91** *MA-10475*	$ 37,400/89-90 46,000/90-91
0949	**KHALIL, NASREEN** *Medicine, Manitoba* **GREENBERG, ARNOLD H.** *Pediatrics and Child Health, Manitoba* Immunoregulation of pulmonary fibrosis **1990-91 EP Apr 90–Jun 90** *MA-9951*	$ 91,350/87-89 44,370/89-90 10,440/90-91	0958	**KIM, SEUNG U.** *Medicine, British Columbia* Neurobiology of oligodendrocytes **1990-91 EP Apr 90–Mar 91** *MT-7700*	$ 406,595/82-89 75,223/89-90 68,863/90-91
0950	**KHALIL, NASREEN** *Medicine, Manitoba* **GREENBERG, ARNOLD H.** *Pediatrics and Child Health, Manitoba* Transforming growth factor-beta regulation of pulmonary fibrosis **1990-91 EP Jul 90–Mar 91** *MA-10999*	$ 44,021/90-91	0959	**KIMURA, DOREEN** *Psychology, Western Ontario* Hormonal influences on intellectual function **1990-91 EP Apr 90–Mar 91** *MT-10288*	$ 45,665/88-89 43,000/89-90 49,072/90-91
0951	**KHAN, MASOOD U.N.** *Medicine, McGill* Endosomal insulin receptor kinase: nature and regulation *MA-8147*	$ 188,915/83-89 35,720/89-90 18,394/90-91	0960	**KIMURA, DOREEN** *Psychology, Western Ontario* Left cerebral intrahemispheric organization for communicative-motor function **1990-91 EP Apr 90–Mar 91** *MT-5025*	$ 543,706/73-89 45,857/89-90 40,700/90-91
			0961	**KING, MALCOLM** *Medicine, Alberta* The cytoprotective role of mucus: interrelations with smoking and cancer *MA-8626*	$ 187,313/84-89 46,000/89-90 23,575/90-91

List No.	Grant/Award	Financial History
0962	**KIRBY, R. LEE** *Medicine, Dalhousie* **MARBLE, ALLAN E.** *Electrical Engineering, Technical University of Nova Scotia* **GARDNER, MARTIN J.** *Medicine, Dalhousie* Cardiac-locomotor coupling *MA-10289*	$ 57,549/88-89 34,849/89-90 17,860/90-91
0963	**KIRKPATRICK, D. LYNN** *Chemistry, Regina* Synthesis and evaluation of potential bioreductively activated disulfides *MA-10183*	$ 50,750/88-89 47,150/89-90 38,309/90-91
0964	**KIRULUTA, H. GEORGE** **ELHILALI, MOSTAFA M.** *Surgery, McGill* The evolution and reversibility of obstructive changes in the bladder muscularis **1990-91 EP Apr 90–Mar 91** *MT-10478*	$ 61,519/89-90 77,225/90-91
0965	**KISILEVSKY, ROBERT S.** *Pathology, Queen's* Amyloidogenesis: an analysis of the causative factors in an experimental murine model **1990-91 EP Apr 90–Mar 91** *MT-3153*	$ 1,552,815/68-89 97,065/89-90 97,065/90-91
0966	**KISILEVSKY, ROBERT S.** **LUDWIN, SAMUEL K.** *Pathology, Queen's* Sulphated glycosaminoglycans in Alzheimer's disease **1990-91 EP Apr 90–Mar 91** *MA-10477*	$ 37,438/89-90 45,250/90-91
0967	**KLEIN, MICHEL H.** **DORRINGTON, KEITH J.** *Immunology, Toronto* Structure, interactions and biological functions of immunoglobulin domains **1990-91 EP Apr 90–Mar 91** *MT-4259*	$ 1,674,529/70-89 146,603/89-90 146,000/90-91
0968	**KLEIN, MICHEL H.** *Immunology, Toronto* Structure, function, molecular biology of soluble mediators of the immune network **1990-91 EP Apr 90–Mar 91** *MT-6780*	$ 446,374/81-89 75,000/89-90 75,000/90-91
0969	**KLINGEMANN, HANS-G.** *Medicine, British Columbia* Role of fibronectin as an activator of hematopoietic cells **1990-91 EP Apr 90–Mar 91** *MT-10478*	$ 66,681/89-90 88,908/90-91
0970	**KLIP, AMIRA** *Pediatrics, Toronto* Molecular regulation of glucose transport in muscle *1990-91 expenditure breakdown: research support, $85,672; equipment, $11,660* **1990-91 EP Apr 90–Mar 91** *MT-7307*	$ 500,426/80-89 81,947/89-90 97,332/90-91

N° de liste	Subvention/Bourse	Résumé financier
0971	**KNAUS, EDWARD E.** *Pharmacy and Pharmaceutical Sciences, Alberta* **TRIGGLE, CHRISTOPHER R.** *Pharmacology and Therapeutics, Calgary* **WOLOWYK, MICHAEL W.** *Pharmacy and Pharmaceutical Sciences, Alberta* The design and pharmacological evaluation of heterocyclic calcium channel antagonists and agonists **1990-91 EP Apr 90–Mar 91** *MT-8892*	$ 194,816/84-89 57,603/89-90 46,983/90-91
0972	**KNAUS, EDWARD E.** *Pharmacy and Pharmaceutical Sciences, Alberta* The design and pharmacological evaluation of new nitrogen heterocycles **1990-91 EP Apr 90–Mar 91** *MT-4888*	$ 453,391/72-89 60,970/89-90 60,970/90-91
0973	**KNILL, RICHARD L.** *Anesthesia, Western Ontario* Respiratory function during and after anaesthesia in man **1990-91 EP Apr 90–Mar 91** *MA-6443*	$ 457,918/78-89 73,752/89-90 74,468/90-91
0974	**KNOWLES, JOHN B.** *Psychology, Queen's* **MACLEAN, ALISTAIR W.** *Psychology, Queen's* **WALDRON, JOHN J.** *Psychiatry, Queen's* **BRUNET, DONALD G.** *Medicine, Queen's* Sleep abnormalities in affective illness *MA-6937*	$ 235,133/83-89 42,024/89-90 21,639/90-91
0975	**KOLB, BRYAN E.** *Psychology, Lethbridge* Steroids and recovery from brain damage *MA-9084*	$ 124,026/85-89 37,822/89-90 16,639/90-91
0976	**KOMIYAMA, KUNIO** *Dentistry, Saskatchewan* Study of the regulation of glycogen metabolism in fresh isolates of Actinomyces viscosus of root surface caries and non-caries origin *MA-10200*	$ 37,000/88-89 37,000/89-90 16,188/90-91
0977	**KOOPMANS, HENRY S.** *Medical Physiology, Calgary* The role of glucose and insulin in the control of feeding behavior **1990-91 EP Apr 90–Mar 91** *MT-9539*	$ 114,275/85-89 47,991/89-90 52,925/90-91
0978	**KOPELMAN, HINDA** *Pediatrics, McGill* Pancreatic fluid and electrolyte secretion **1990-91 EP Apr 90–Mar 91** *MA-9614*	$ 126,248/85-89 45,000/89-90 45,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
0979	**KORECKY, BORIVOJ** *Physiology, Ottawa* Changing phenotype of cardiac myocyte during growth **1990-91 EP Apr 90–Mar 91** *MT-2445*	$ 566,745/66-89 58,093/89-90 58,093/90-91	0987	**KOZOUSEK, VLADIMIR** **LEBLANC, RAYMOND P.** *Ophthalmology, Dalhousie* Computer-assisted static perimetry in the prediction of progression of diabetic retinopathy **1990-91 EP Apr 90–Mar 91** *MA-10479*	$ 33,975/89-90 41,900/90-91
0980	**KOREN, GIDEON** **RADDE, INGEBORG C.** *Pediatrics, Toronto* The role of the placenta in perinatal toxicology: study in a human placental perfusion system **1990-91 EP Apr 90–Mar 91** *MT-1797*	$ 658,219/65-89 49,904/89-90 58,776/90-91	0988	**KRAICER, JACOB** *Physiology, Western Ontario* Mechanisms governing secretion of adenohypophysial hormones **1990-91 EP Apr 90–Mar 91** *MT-1634*	$ 1,761,036/64-89 120,000/89-90 120,000/90-91
0981	**KOREN, GIDEON** *Pediatrics, Toronto* Determinants of renal handling of drugs during development **1990-91 EP Apr 90–Mar 91** *MA-8544*	$ 297,919/84-89 68,690/89-90 68,690/90-91	0989	**KRANTIS, ANTHONY** *Physiology, Ottawa* Enteric neurotransmission: gastrointestinal motility, blood flow and duodenal ulcer *1990-91 expenditure breakdown: research support, $50,358; equipment, $34,153* **1990-91 EP Apr 90–Mar 91** *MT-10434*	$ 32,103/88-89 42,805/89-90 84,511/90-91
0982	**KORNELUK, ROBERT G.** *Pediatrics, Ottawa* Molecular genetics of the human chromosome 19 region containing the myotonic dystrophy gene **1990-91 EP Apr 90–Mar 91** *MA-9820*	$ 124,139/86-89 64,892/89-90 57,049/90-91	0990	**KRAUSE, HENRY M.** *Banting and Best Department of Medical Research, Toronto* An analysis of the role(s) of ftz protein phosphorylation during Drosophila development **1990-91 EP Apr 90–Mar 91** *MT-10480*	$ 52,500/89-90 70,000/90-91
0983	**KOROPATNICK, D. JAMES** *Oncology, Western Ontario* **CHERIAN, GEORGE M.** *Pathology, Western Ontario* **CAIRNEY, A. ELIZABETH L.** *Pediatrics, Western Ontario* The role of metallothionein in cellular drug and radiation resistance **1990-91 EP Apr 90–Mar 91** *MA-10728*	$ 36,615/89-90 48,820/90-91	0991	**KREIS, CHRISTOPHE** *Physiologie, Laval* Regulation of proinflammatory molecules in polymorphonuclear leukocytes and synoviocytes in chronic inflammatory diseases: post-transcriptional and transcriptional levels **1990-91 EP avr 90–mar 91** *MA-10481*	$ 40,500/89-90 54,000/90-91
0984	**KOTHARY, RASHMI K.** *Institut du cancer, Hôpital Notre-Dame (Montréal)* Molecular characterization of a neural-specific gene, dystonia musculorum *1990-91 ventilation des dépenses: aide à la recherche, $45,000; appareils, $35,000* **1990-91 EP jlt 90–mar 91** *MT-10844*	$ 80,000/90-91	0992	**KREMER, RICHARD** *Medicine, McGill* Effect of 1,25 dihydroxyvitamin D in the control of cell growth and differentiation and regulation of gene expression *1990-91 expenditure breakdown: research support, $41,812; equipment, $3,452* **1990-91 EP Jul 90–Mar 91** *MT-10839*	$ 45,264/90-91
0985	**KOVACS, KALMAN T.** *Pathology, Toronto* Pathology of human pituitary adenomas **1990-91 EP Apr 90–Mar 91** *MT-6349*	$ 469,753/78-89 64,683/89-90 64,250/90-91	0993	**KRNJEVIC, KRESIMIR** *Physiology, McGill* Coupling between metabolism and neuronal/synaptic function **1990-91 EP Apr 90–Mar 91** *MT-1966*	$ 1,500,194/65-89 95,570/89-90 95,570/90-91
0986	**KOVAL, SUSAN F.** **MURRAY, ROBERT G.E.** *Microbiology and Immunology, Western Ontario* Characterization of bacterial surface structures *1990-91 expenditure breakdown: research support, $121,620; equipment, $2,000* **1990-91 EP Apr 90–Mar 91** *MT-1828*	$ 2,063,935/57-89 120,000/89-90 123,620/90-91	0994	**KROPINSKI, ANDREW M.** *Microbiology and Immunology, Queen's* Development of a cosmid cloning system for Pseudomonas aeruginosa **1990-91 EP Apr 90–Mar 91** *MA-7494*	$ 307,530/82-89 56,389/89-90 52,114/90-91

List No.	Grant/Award	Financial History
0995	**KRUKOFF, TERESA L.** *Anatomy and Cell Biology, Alberta* Neuropeptides and the autonomic nervous system **1990-91 EP Apr 90–Mar 91** *MA-9468*	$ 169,404/85-89 57,504/89-90 51,619/90-91
0996	**KRUUV, JACK** **LEPOCK, JAMES R.** *Physics, Waterloo* Mechanisms of freeze-thaw damage to mammalian cells and modification of effects **1990-91 EP Apr 90–Mar 91** *MT-4601*	$ 298,981/72-89 39,836/89-90 42,967/90-91
0997	**KRYGER, MEIR H.** *Medicine, Manitoba* Sleep in health and disease **1990-91 EP Apr 90–Mar 91** *MA-10482*	$ 30,150/89-90 40,200/90-91
0998	**KUBOW, STANLEY** *Dietetics and Human Nutrition, McGill* Influence of dietary fats on prostaglandin synthetase metabolism of teratogenic drugs **1990-91 EP Apr 90–Mar 91** *MA-10011*	$ 84,350/87-89 44,862/89-90 43,750/90-91
0999	**KUDLOW, JEFFREY E.** *Clinical Biochemistry, Toronto* Cellular and molecular mechanisms of endocrine growth control **1990-91 EP Apr 90–Mar 91** *MT-7482*	$ 331,085/81-89 74,534/89-90 12,800/90-91
1000	**KUKSIS, ARNIS A.** *Banting and Best Department of Medical Research, Toronto* Lipid digestion and absorption *1990-91 expenditure breakdown: research support, $119,662; equipment, $4,975* **1990-91 EP Apr 90–Mar 91** *MT-1046*	$ 1,490,578/61-89 112,414/89-90 124,637/90-91
1001	**KUKSIS, ARNIS A.** *Banting and Best Department of Medical Research, Toronto* Intestinal brush border membranes in inflammatory bowel disease **1990-91 EP Apr 90–Mar 91** *MT-10290*	$ 41,000/88-89 41,000/89-90 49,768/90-91
1002	**KUMAR, SHRAWAN** *Physical Therapy, Alberta* The role of intra-abdominal pressure in trunk mechanics **1990-91 EP Apr 90–Mar 91** *MA-10706*	$ 46,519/89-90 49,858/90-91
1003	**KUNIMOTO, DENNIS Y.** *Medical Microbiology and Infectious Diseases, Alberta* Lymphokine receptor *1990-91 expenditure breakdown: research support, $50,595; equipment, $6,220* **1990-91 EP Jul 90–Mar 91** *MA-10899*	$ 56,815/90-91
1004	**LABELLA, FRANK S.** *Pharmacology and Therapeutics, Manitoba* ACTH, endorphins, other neuropeptides and their receptors **1990-91 EP Apr 90–Mar 91** *MT-1047*	$ 1,422,090/61-89 111,893/89-90 111,893/90-91
1005	**LABOW, ROSALIND S.** *Surgery, Ottawa* **DESILETS, MICHEL** *Physiology, Ottawa* The effect of temperature on heart preservation **1990-91 EP Jul 90–Mar 91** *MA-10977*	$ 30,813/90-91
1006	**LACAILLE, JEAN-CLAUDE** *Physiologie, Montréal* Hippocampal inhibitory interneurons and experimental epilepsy *1990-91 ventilation des dépenses: aide à la recherche, $34,235; appareils, $30,146* **1990-91 EP jlt 90–mar 91** *MT-10848*	$ 64,381/90-91
1007	**LACHAPELLE, PIERRE** *Ophthalmology, McGill* Functional significance of each oscillatory potential of the electroretinogram *MA-8649*	$ 151,908/84-89 36,000/89-90 18,450/90-91
1008	**LACROIX, ANDRE** *Médecine, Montréal* **GAVINO, VICTOR C.** *Nutrition, Montréal* **GHADIRIAN, PARVIZ** *Nutrition, Montréal* **BHAT, PANGALA V.** *Médecine, Montréal* Epidemiology of diet and cancers of breast, prostate and colon: biological markers **1990-91 EP avr 90–mar 91** *MA-10339*	$ 67,290/88-89 67,290/89-90 147,753/90-91
1009	**LAHAIE, RAYMOND G.** *Médecine, Montréal* Biology of promotilin **1990-91 EP avr 90–jui 90** *MA-10291*	$ 43,500/88-89 40,000/89-90 10,000/90-91
1010	**LAKE, NORMA** *Physiology, McGill* Effects of taurine depletion on the heart **1990-91 EP Apr 90–Mar 91** *MT-10292*	$ 35,000/88-89 32,100/89-90 32,100/90-91
1011	**LAL, SAMARTHJI** *Psychiatry, McGill* Studies on apomorphine-induced yawning in man *1990-91 expenditure breakdown: research support, $42,770; equipment, $5,200* **1990-91 EP Jul 90–Mar 91** *MT-11077*	$ 47,970/90-91
1012	**LALA, PEEYUSH K.** *Anatomy, Western Ontario* Immunobiology of the fetomaternal interface **1990-91 EP Apr 90–Jun 90** *MT-6661*	$ 564,412/79-89 66,327/89-90 15,606/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1013	**LALA, PEEYUSH K.** *Anatomy, Western Ontario* Biology of the fetomaternal interface *1990-91 expenditure breakdown: research support, $80,854; equipment, $8,015* **1990-91 EP Jul 90–Mar 91** *MT-10945*	$ 88,869/90-91
1014	**LAM, JOSEPH S.-L.** *Microbiology, Guelph* The role of lipopolysaccharide in Pseudomonas aeruginosa pathogenesis and antiidiotype response against lipopolysaccharide-specific monoclonal antibodies **1990-91 EP Apr 90–Mar 91** *MA-9085*	$ 178,864/85-89 56,849/89-90 53,407/90-91
1015	**LAM, JULES Y.T.C.** *Médecine, Montréal* Vessel wall thromboresistance, endothelium and rheology **1990-91 EP avr 90–mar 91** *MA-10425*	$ 46,053/88-89 46,053/89-90 46,783/90-91
1016	**LANDRY, JACQUES** *Médecine, Laval* Regulatory mechanisms of the cell response to hyperthermia **1990-91 EP avr 90–mar 91** *MT-7088*	$ 429,124/79-89 73,542/89-90 95,595/90-91
1017	**LANDYMORE, RODERICK W.** *Surgery, Dalhousie* **MARBLE, ALLAN E.** *Electrical Engineering, Technical University of Nova Scotia* Monitoring the electrical status of the heart during cardioplegic arrest **1990-91 EP Apr 90–Mar 91** *MA-10028*	$ 103,304/87-89 62,322/89-90 63,419/90-91
1018	**LANE, BYRON G.** *Biochemistry, Toronto* Studies of developmentally regulated nucleases and proteins **1990-91 EP Apr 90–Mar 91** *MT-1226*	$ 1,409,674/62-89 120,819/89-90 134,244/90-91
1019	**LANG, BERND F.** *Biochimie, Montréal* Sequencing of fungal mitochondrial genomes **1990-91 EP avr 90–mar 91** *MT-10578*	$ 54,225/89-90 72,300/90-91
1020	**LANGER, JACOB C.** *Surgery, McMaster* Ischemia-reperfusion injury in the developing gut **1990-91 EP Jul 90–Mar 91** *MA-10878*	$ 37,816/90-91
1021	**LANGILLE, B. LOWELL** *Pathology, Toronto* Influence of blood flow on arterial development **1990-91 EP Apr 90–Sep 90** *MA-9540*	$ 167,923/85-89 37,633/89-90 38,422/90-91
1022	**LANGILLE, B. LOWELL** **GOTLIEB, AVRUM I.** *Pathology, Toronto* Endothelial injury and repair: influence of hemodynamic stresses on the endothelial cell cytoskeleton **1990-91 EP Apr 90–Mar 91** *MA-10029*	$ 113,168/87-89 70,032/89-90 77,289/90-91
1023	**LANGILLE, ROBERT M.** *Anatomy, Ottawa* Mechanisms of cellular differentiation and pattern formation during craniofacial development **1990-91 EP Apr 90–Mar 91** *MT-10579*	$ 43,535/89-90 45,000/90-91
1024	**LANGLEBEN, DAVID** *Medicine, McGill* Effects of general anesthetics on the fibrinolytic activity of the pulmonary arterial endothelium: significance for postoperative pulmonary embolism *MA-10293*	$ 42,819/88-89 42,819/89-90 34,790/90-91
1025	**LANGLOIS, YVES E.** *Chirurgie, Montréal* **ROEDERER, GHISLAINE O.** *Médecine, Montréal* **DURAND, LOUIS-GILLES** *Médecine, Montréal* Computer-based pattern recognition method for quantitative analysis of Doppler flow spectra in lower limb arteries **1990-91 EP avr 90–mar 91** *MA-10030*	$ 123,586/87-89 71,406/89-90 65,000/90-91
1026	**LAPOINTE, JEAN-YVES** *Physique, Montréal* Etude de la régulation des conductances membranaires chez le tubule rénal proximal **1990-91 EP jit 90–mar 91** *MT-10900*	$ 43,061/90-91
1027	**LAPOINTE, JEAN-YVES** *Physique, Montréal* Etude des transports couplés au Na chez des cellules rénales isolées **1990-91 EP avr 90–mar 91** *MT-10580*	$ 43,873/89-90 52,699/90-91
1028	**LAPP, WAYNE S.** *Physiology, McGill* Studies on graft-versus-host induced functional and morphological changes **1990-91 EP Apr 90–Mar 91** *MT-3526*	$ 1,235,909/69-89 112,099/89-90 113,187/90-91
1029	**LAROCHELLE, PIERRE** *Pharmacologie, Montréal* Atrial natriuretic factor in humans *MA-10340*	$ 30,140/88-89 30,140/89-90 13,186/90-91

List No.	Grant/Award	Financial History
1030	**LASKIN, CARL A.** *Medicine, Toronto* **HANNAH, MARY E.** *Obstetrics and Gynecology, Toronto* **TENENBAUM, JERRY** *Medicine, Toronto* **MANDEL, FRED P.** *Obstetrics and Gynecology, Toronto* **RITCHIE, J.W. KNOX** *Obstetrics and Gynecology, Toronto* **BOMBARDIER, CLAIRE** *Health Administration, Toronto* Prednisone/ASA treatment in women with recurrent fetal loss **1990-91 EP Apr 90–Mar 91** *MA-10267*	$ 131,883/88-89 119,683/89-90 134,920/90-91
1031	**LAU, DAVID C.W.** *Medicine, Ottawa* Studies on the control of preadipocyte replication and differentiation **1990-91 EP Apr 90–Mar 91** *MA-9178*	$ 152,966/85-89 46,560/89-90 48,480/90-91
1032	**LAUGHREA, MICHAEL** *Medicine, McGill* Ribosomal studies *MA-9541*	$ 166,688/85-89 51,584/89-90 26,437/90-91
1033	**LAUPACIS, ANDREAS** *Medicine, Western Ontario* **SIM, DALICE A.** *Epidemiology and Biostatistics, Western Ontario* **TUGWELL, PETER** *Clinical Epidemiology and Biostatistics, McMaster* **FEENY, DAVID H.** *Economics, McMaster* **BOURNE, ROBERT B.** *Surgery, Western Ontario* **RORABECK, CECIL H.** *Surgery, Western Ontario* A randomized study of cemented versus non-cemented hip prostheses **1990-91 EP Apr 90–Mar 91** *MA-10031*	$ 202,146/87-89 122,917/89-90 125,386/90-91
1034	**LAUTT, W. WAYNE** *Pharmacology and Therapeutics, Manitoba* Neural and vascular role and control of liver functions **1990-91 EP Apr 90–Mar 91** *MA-8592*	$ 356,823/84-89 84,803/89-90 85,626/90-91
1035	**LAUTT, W. WAYNE** *Pharmacology and Therapeutics, Manitoba* Splanchnic portal circulation **1990-91 EP Apr 90–Mar 91** *MA-9764*	$ 145,797/86-89 64,588/89-90 64,588/90-91
1036	**LAVALLEE, MICHEL** *Physiologie, Montréal* Regulation of ventricular perfusion and function in normal and ischemic states **1990-91 EP avr 90–mar 91** *MA-8906*	$ 296,106/84-89 70,000/89-90 70,000/90-91
1037	**LAVIOLETTE, MICHEL** *Médecine, Laval* Rôle des cellules et des leucotriènes dans la physiopathologie des maladies respiratoires **1990-91 EP avr 90–mar 91** *MA-10032*	$ 92,850/87-89 52,250/89-90 50,000/90-91
1038	**LAVOIE, MARC** *Biochimie, Laval* Ecology of the oral cavity of mice **1990-91 EP avr 90–jui 90** *MA-9841*	$ 89,338/87-89 37,968/89-90 8,934/90-91
1039	**LAVOIE, MARC** *Biochimie, Laval* Ecology of the oral cavity of mice **1990-91 EP jlt 90–mar 91** *MT-11047*	$ 57,064/90-91
1040	**LAW, BARBARA J.** *Medical Microbiology, Manitoba* **MOFFATT, MICHAEL E.K.** *Pediatrics and Child Health, Manitoba* A comparative trial of three versus ten days of trimethoprim-sulfamethoxazole therapy for uncomplicated urinary tract infection in girls *MA-10268*	$ 55,128/88-89 55,128/89-90 39,464/90-91
1041	**LAZAROVITS, ANDREW I.** *Medicine, Western Ontario* The CD7 antigen (Tp40) and T lymphocyte function *MA-10384*	$ 56,525/88-89 47,000/89-90 32,900/90-91
1042	**LAZIER, CATHERINE B.** *Biochemistry, Dalhousie* Estrogen receptors, estrogen responsiveness and antiestrogen interactions **1990-91 EP Apr 90–Mar 91** *MT-4810*	$ 681,134/72-89 69,340/89-90 70,013/90-91
1043	**LEBEL, MARCEL** **GROSE, JOHN H.** *Médecine, Laval* Vasoactive substances and pathogenesis of essential hypertension *MA-7705*	$ 371,433/82-89 68,289/89-90 47,968/90-91
1044	**LEBLANC, JACQUES A.** *Physiologie, Laval* Nervous and endocrine control of meal thermogenesis *1990-91 ventilation des dépenses: aide à la recherche, $71,052; appareils, $2,900* **1990-91 EP avr 90–mar 91** *MT-0878*	$ 732,964/60-89 69,340/89-90 73,952/90-91
1045	**LEBLANC, NORMAND R.** *Physiology, Manitoba* Electrogenesis and Ca2+ transients in single vascular smooth muscle cells *1990-91 expenditure breakdown: research support, $30,870; equipment, $15,261* **1990-91 EP Jul 90–Mar 91** *MT-10863*	$ 46,131/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1046	**LEBLOND, CHARLES P.** ***Anatomy, McGill*** Radioautography in medical sciences: an approach to the study of cell dynamics **1990-91 EP Apr 90–Mar 91** *MT-0906*	$ 3,658,957/69-89 227,350/89-90 243,412/90-91
1047	**LECOMTE, ROGER** ***Médecine nucléaire et radiobiologie, Sherbrooke*** Tomographie d'émission par positrons à haute résolution spatiale pour l'investigation chez l'animal **1990-91 EP avr 90–mar 91** *MT-8549*	$ 361,248/84-89 98,621/89-90 202,957/90-91
1048	**LEDERIS, KARL P.** ***Pharmacology and Therapeutics, Calgary*** Peptide hormones in two neurosecretory systems **1990-91 EP Apr 90–Jun 90** *MT-3911*	$ 2,498,346/69-89 172,584/89-90 39,208/90-91
1049	**LEDSOME, JOHN R.** ***Physiology, British Columbia*** Reflex control of the cardiovascular system **1990-91 EP Apr 90–Mar 91** *MA-3339*	$ 677,184/68-89 52,950/89-90 53,464/90-91
1050	**LEE, EUNICE R.** ***Anatomy, Ottawa*** Collagens and proteoglycans of cartilage *1990-91 expenditure breakdown: research support, $38,030; equipment, $5,021* **1990-91 EP Jul 90–Mar 91** *MT-10965*	$ 43,051/90-91
1051	**LEE, JEREMY S.** ***Biochemistry, Saskatchewan*** Monoclonal antibodies to nucleic acids **1990-91 EP Apr 90–Mar 91** *MT-9098*	$ 225,000/85-89 80,000/89-90 80,000/90-91
1052	**LEE, PATRICK W.K.** ***Microbiology and Infectious Diseases, Calgary*** The molecular basis of virus attachment to host cells **1990-91 EP Apr 90–Mar 91** *MA-7930*	$ 352,591/83-89 83,749/89-90 86,893/90-91
1053	**LEE, ROBERT G.** **BECKER, WERNER J.** ***Clinical Neurosciences, Calgary*** Motor control mechanisms in humans with motor system disorders **1990-91 EP Apr 90–Mar 91** *MT-4209*	$ 640,019/70-89 52,404/89-90 52,404/90-91
1054	**LEE, ROBERT M.K.W.** ***Anesthesia, McMaster*** **KWAN, CHIU-YIN** ***Biomedical Sciences, McMaster*** Control of smooth muscle cell growth in hypertension **1990-91 EP Apr 90–Mar 91** *MA-10729*	$ 51,959/89-90 69,278/90-91
1055	**LEE, SAMUEL S.** ***Medicine, Calgary*** Splanchnic veins in cirrhosis **1990-91 EP Jul 90–Mar 91** *MT-11039*	$ 42,000/90-91
1056	**LEE, SPENCER H.S.** **FAULKNER, GARY T.** ***Microbiology, Dalhousie*** Identification and functional analysis of the interferon-producer immunocytes *MA-10368*	$ 45,600/88-89 45,600/89-90 23,370/90-91
1057	**LEEDER, J. STEVEN** ***Pediatrics, Toronto*** Mechanisms and models of idiosyncratic drug reactions **1990-91 EP Jul 90–Mar 91** *MA-11042*	$ 50,921/90-91
1058	**LEENEN, FRANS H.H.** ***Medicine, Ottawa*** Sodium, blood pressure and sympathetic activity in hypertension *MA-9146*	$ 236,916/85-89 67,238/89-90 34,623/90-91
1059	**LEFEBVRE, YVONNE A.** ***Medicine, Ottawa*** Translocation of glucocorticoids across cellular membranes **1990-91 EP Apr 90–Mar 91** *MA-6205*	$ 421,616/77-89 59,172/89-90 62,576/90-91
1060	**LEHOUX, JEAN-GUY** ***Biochimie, Sherbrooke*** Etude des mécanismes régulateurs de la synthèse des corticostéroides et de l'aldostérone **1990-91 EP jlt 90–mar 91** *MT-10983*	$ 78,000/90-91
1061	**LEHOUX, JEAN-GUY** ***Biochimie, Sherbrooke*** Etude des mécanismes régulateurs de la synthèse des corticostéroides et de l'aldostérone **1990-91 EP avr 90–jui 90** *MT-4653*	$ 1,094,032/72-89 88,434/89-90 20,808/90-91
1062	**LEMAIRE, IRMA** ***Pharmacology, Ottawa*** Alveolar macrophage differentiation and cytokine production in lung inflammation and fibrosis **1990-91 EP Apr 90–Mar 91** *MT-7310*	$ 331,339/80-89 56,091/89-90 64,600/90-91
1063	**LEMAIRE, SIMON** ***Pharmacology, Ottawa*** Peptides in the adrenal medulla: structure and function of dynorphin-, bombesin-, and histogranin-related peptides **1990-91 EP Jul 90–Mar 91** *MA-11170*	$ 75,535/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1064	**LEMAY, ANDRE** **FAURE, NACIA** *Obstétrique et gynécologie, Laval* Modifications moléculaires de la LH et de la FSH circulantes lors de l'hypogonadotrophisme secondaire au traitement par agoniste de la LHRH **1990-91 EP avr 90–mar 91** *MA-10033*	$ 84,245/87-89 68,675/89-90 56,710/90-91	1074	**LEVESQUE, ROGER C.** *Microbiologie, Laval* Molecular genetics of Toxoplasma gondii: studies on genes conserved in evolution *1990-91 ventilation des dépenses: aide à la recherche, $43,005; appareils, $6,550* **1990-91 EP jlt 90–mar 91** *MA-11029*	$ 49,555/90-91
1065	**LEMAY, GUY** *Microbiologie et immunologie, Montréal* Synthèse protéique durant l'infection par réovirus **1990-91 EP avr 90–mar 91** *MT-10582*	$ 74,750/89-90 57,000/90-91	1075	**LEVINE, DAVID Z.** *Medicine, Ottawa* Regulation of distal tubule hydrogen ion secretion **1990-91 EP Apr 90–Mar 91** *MT-3836*	$ 1,164,153/69-89 126,000/89-90 126,000/90-91
1066	**LEMIEUX, GUY** *Médecine, Montréal* Etudes physiologiques et métaboliques sur le contrôle de l'équilibre acido-basique par le rein *MA-7874*	$ 717,315/82-89 100,332/89-90 44,139/90-91	1076	**LEVINE, MARTIN D.** *Electrical Engineering, McGill* Computer vision applied to cell studies **1990-91 EP Apr 90–Mar 91** *MT-3236*	$ 667,664/68-89 44,373/89-90 44,373/90-91
1067	**LEMIEUX, SUZANNE** *Institut Armand-Frappier (Laval-des-Rapides)* Phenotypes and properties of natural killer cell subsets in the mouse *MA-10296*	$ 61,000/88-89 61,000/89-90 31,263/90-91	1077	**LEVY, EMILE H.** *Nutrition, Montréal* Ontogeny and regulation of intestinal lipoprotein synthesis and secretion **1990-91 EP avr 90–mar 91** *MT-10584*	$ 43,598/89-90 48,664/90-91
1068	**LEMIRE, BERNARD D.** *Biochemistry, Alberta* Transport, assembly, and regulation of the yeast mitochondrial succinate dehydrogenase **1990-91 EP Apr 90–Mar 91** *MT-10583*	$ 76,000/89-90 60,000/90-91	1078	**LEVY, GARY A.** *Medicine, Toronto* Role of macrophage procoagulant activity in the immunopathogenesis of viral hepatitis **1990-91 EP Apr 90–Mar 91** *MA-6787*	$ 382,903/81-89 73,542/89-90 84,165/90-91
1069	**LENAERTS, VINCENT** *Pharmacie, Montréal* **PHILLIPS, NIGEL C.** *Médecine, McGill* Nanospheres targeting to metastatic tumors **1990-91 EP avr 90–mar 91** *MA-10216*	$ 35,166/88-89 35,166/89-90 39,229/90-91	1079	**LEVY, MORTIMER** *Physiology, McGill* Renal and electrolyte studies in canine models of ascites **1990-91 EP Apr 90–Mar 91** *MT-3527*	$ 1,039,777/69-89 131,068/89-90 135,730/90-91
1070	**LETARTE, MICHELLE V.T.** *Immunology, Toronto* Structure and function of membrane proteins of human lymphocytes **1990-91 EP Apr 90–Mar 91** *MT-6247*	$ 708,529/77-89 88,250/89-90 89,107/90-91	1080	**LEWIS, MARION** **ZELINSKI, TERESA A.** *Pediatrics and Child Health, Manitoba* Human blood groups **1990-91 EP Apr 90–Mar 91** *MT-3391*	$ 923,787/69-89 108,910/89-90 120,602/90-91
1071	**LEUNG, PETER C.K.** *Obstetrics and Gynecology, British Columbia* Aminergic control of gonadotropin release **1990-91 EP Apr 90–Mar 91** *MA-7711*	$ 293,702/82-89 54,429/89-90 56,081/90-91	1081	**LEWIS, PETER N.** *Biochemistry, Toronto* Chromatin stucture and function **1990-91 EP Apr 90–Mar 91** *MT-5453*	$ 613,109/74-89 65,000/89-90 65,000/90-91
1072	**LEUNG, PETER C.K.** *Obstetrics and Gynecology, British Columbia* Regulation of ovarian cell function **1990-91 EP Apr 90–Mar 91** *MA-9542*	$ 134,620/85-89 46,160/89-90 46,160/90-91	1082	**LICHTENSTEIN, SAMUEL V.** *Surgery, Toronto* **NAYLOR, C. DAVID** *Medicine, Toronto* **SALERNO, TOMAS A.** *Surgery, Toronto* Warm versus hypothermic coronary surgery: a multi-centre trial *1990-91 expenditure breakdown: research support, $148,961; equipment, $1,100* **1990-91 EP Jul 90–Mar 91** *MA-10891*	$ 150,061/90-91
1073	**LEVESQUE, ROGER C.** *Microbiologie, Laval* Molecular genetics sequence and phylogenetic analysis of multiresistant transposons **1990-91 EP avr 90–mar 91** *MT-8926*	$ 205,996/85-89 54,871/89-90 68,973/90-91			

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1083	**LICHTENSTEIN, SAMUEL V.** *Surgery, Toronto* Comparison of warm and cold blood cardioplegia *MA-9616*	$ 115,319/85-89 40,319/89-90 20,664/90-91
1084	**LIEBGOTT, BERNARD** *Anatomy, Toronto* Development of the neuromuscular junction in vitro **1990-91 EP Apr 90–Jun 90** *MA-7639*	$ 297,126/82-89 48,328/89-90 12,199/90-91
1085	**LIEW, CHOONG-CHIN** *Clinical Biochemistry, Toronto* Molecular basis of cardiac myocyte differentiation **1990-91 EP Jul 90–Mar 91** *MT-10953*	$ 52,500/90-91
1086	**LIGHT, R. BRUCE** *Medical Microbiology, Manitoba* Pathophysiology of pneumonia **1990-91 EP Apr 90–Mar 91** *MT-8085*	$ 218,973/83-89 43,075/89-90 47,651/90-91
1087	**LILLICRAP, DAVID P.** *Pathology, Queen's* A study of the structure/function relationships of factor IX by an analysis of mutant protein characteristics *1990-91 expenditure breakdown: research support, $42,694; equipment, $2,030* **1990-91 EP Jul 90–Mar 91** *MA-10912*	$ 44,724/90-91
1088	**LILLICRAP, DAVID P.** *Pathology, Queen's* Molecular characterization of type II von Willebrand's disease as a model of abnormal primary hemostasis **1990-91 EP Apr 90–Mar 91** *MA-10585*	$ 41,352/89-90 52,548/90-91
1089	**LIMEBACK, HARDY F.** *Dentistry, Toronto* Enamel protein biochemistry, enamel maturation and rickets **1990-91 EP Apr 90–Mar 91** *MA-9121*	$ 153,382/85-89 51,565/89-90 49,289/90-91
1090	**LING, VICTOR** *Medical Biophysics, Toronto* Molecular genetics of hemolysin B function **1990-91 EP Apr 90–Mar 91** *MT-10586*	$ 66,436/89-90 88,581/90-91
1091	**LINGWOOD, CLIFFORD A.** *Clinical Biochemistry, Toronto* Sulfogalactolipid binding protein in spermatogenesis and fertilization *MA-9580*	$ 122,072/85-89 43,816/89-90 22,456/90-91
1092	**LINGWOOD, CLIFFORD A.** *Clinical Biochemistry, Toronto* Metabolic control of sulfogalactolipid biosynthesis **1990-91 EP Apr 90–Mar 91** *MT-7712*	$ 284,135/82-89 53,000/89-90 53,000/90-91
1093	**LINN, THOMAS G.** *Microbiology and Immunology, Western Ontario* Regulation of RNA polymerase synthesis in Escherichia coli *1990-91 expenditure breakdown: research support, $67,918; equipment, $8,600* **1990-91 EP Apr 90–Mar 91** *MT-9209*	$ 177,848/85-89 65,137/89-90 76,518/90-91
1094	**LIU, FEI-FEI** *Radiology, Toronto* **LEVIN, WILFRED** *Radiology, Toronto* **HUNT, JOHN W.** *Medical Biophysics, Toronto* **HILL, RICHARD P.** *Medical Biophysics, Toronto* Hyperthermia with vascular occlusion *1990-91 expenditure breakdown: research support, $22,575; equipment, $6,000* **1990-91 EP Jul 90–Mar 91** *MA-10938*	$ 28,575/90-91
1095	**LIVESLEY, W. JOHN** *Psychiatry, British Columbia* The classification of personality disorders: validation studies **1990-91 EP Apr 90–Mar 91** *MA-9424*	$ 121,784/85-89 53,430/89-90 55,940/90-91
1096	**LO, THEODORE C.-Y.** *Biochemistry, Western Ontario* Molecular mechanism(s) of substrate transport **1990-91 EP Apr 90–Mar 91** *MT5778,10376*	$ 832,572/76-89 132,453/89-90 140,574/90-91
1097	**LOEB, GERALD E.** *Biomedical Engineering, Queen's* Neurophysiological testing of a new control theory for the mammalian spinal cord **1990-91 EP Apr 90–Sep 90** *MA-10587*	$ 38,239/89-90 16,977/90-91
1098	**LOH, LAMBERT C.H.** *Microbiology, Saskatchewan* Molecular biology of cytomegalovirus infections **1990-91 EP Apr 90–Mar 91** *MA-8196*	$ 236,612/83-89 58,103/89-90 53,677/90-91
1099	**LOOMIS, CHRISTOPHER W.** *Pharmacy, Memorial University of Newfoundland* **MILNE, BRIAN** *Anesthesia, Queen's* A study of noradrenergic spinal analgesia in the rat **1990-91 EP Apr 90–Mar 91** *MA-8122*	$ 198,468/83-89 64,019/89-90 44,532/90-91
1100	**LOPASCHUK, GARY D.** *Pediatrics, Alberta* Energy substrate metabolism in the ischemic and non-ischemic heart **1990-91 EP Jul 90–Mar 91** *MT-10865*	$ 50,567/90-91

List No.	Grant/Award	Financial History
1101	**LORD, CATHERINE** *Pediatrics, Alberta* Early diagnosis of autism **1990-91 EP Apr 90–Mar 91** *MA-10588*	$ 42,285/89-90 56,380/90-91
1102	**LOUIE, THOMAS J.** *Microbiology and Infectious Diseases, Calgary* Studies on the bioavailability of menaquinones synthesized by intestinal bacteria **1990-91 EP Apr 90–Mar 91** *MA-10320*	$ 35,000/89-90 31,000/90-91
1103	**LOVASIK, JOHN V.** *Optométrie, Montréal* Provocative neuro-optical testing of visual function in insulin-dependent diabetes mellitus **1990-91 EP avr 90–mar 91** *MA-9264*	$ 62,642/85-89 27,985/89-90 27,985/90-91
1104	**LOW, JAMES A.** *Obstetrics and Gynecology, Queen's* **GALBRAITH, RUTH S.** *Pediatrics, Queen's* **RAYMOND, MICHAEL J.** *Pathology, Queen's* A study of the severity of intrapartum fetal asphyxia *1990-91 expenditure breakdown: research support, $43,461; equipment, $8,700* **1990-91 EP Apr 90–Mar 91** *MT-9834*	$ 81,868/87-89 42,162/89-90 52,161/90-91
1105	**LOWN, J. WILLIAM** *Chemistry, Alberta* DNA sequence specific anticancer and antiviral agents **1990-91 EP Apr 90–Mar 91** *MA-10589*	$ 50,625/89-90 67,500/90-91
1106	**LOZANOFF, SCOTT** *Anatomy, Saskatchewan* Growth and form of the nasal septum in normal (HeJ/C3H) and midfacially deficient (Brachyrrhine Br+) mice **1990-91 EP Apr 90–Mar 91** *MT-10269*	$ 51,027/88-89 43,027/89-90 59,418/90-91
1107	**LUCIER, GREGORY E.** *Medical Physiology, Calgary* Brain stem mechanisms of upper respiratory tract protective reflexes **1990-91 EP Apr 90–Mar 91** *MT-6791*	$ 311,163/81-89 59,440/89-90 59,440/90-91
1108	**LUDWIG, MARA S.** *Medicine, McGill* Lung tissue behavior and its determinants *1990-91 expenditure breakdown: research support, $46,262; equipment, $10,050* **1990-91 EP Apr 90–Mar 91** *MT-10378*	$ 22,522/88-89 22,000/89-90 56,312/90-91
1109	**LUDWIN, SAMUEL K.** *Pathology, Queen's* Remyelination in the central nervous system: the relationship between oligodendrocytes and axons *1990-91 expenditure breakdown: research support, $64,089; equipment, $8,600* **1990-91 EP Apr 90–Mar 91** *MT-5818*	$ 470,103/76-89 57,236/89-90 72,689/90-91
1110	**LUKOWIAK, KENNETH D.** *Medical Physiology, Calgary* Neural mechanisms underlying behaviour and learning in a model system **1990-91 EP Apr 90–Mar 91** *MA-5743*	$ 514,938/75-89 90,785/89-90 111,289/90-91
1111	**LUMSDEN, CHARLES J.** *Medicine, Toronto* Development and analysis of whole-organ theory **1990-91 EP Apr 90–Mar 91** *MA-8635*	$ 152,086/84-89 42,000/89-90 42,000/90-91
1112	**LUSSIER, ANDRE J.A.** **TETREAULT, LEON** **DE MEDICIS, RINALDO** *Médecine, Sherbrooke* Maladie hyperostosique: recherche d'un mécanisme physiopathologique chez l'homme *MA-10007*	$ 46,872/87-89 26,849/89-90 13,766/90-91
1113	**LYE, STEPHEN J.** *Obstetrics and Gynecology, Toronto* Clinical use of mononuclear leukocytes **1990-91 EP Apr 90–Sep 90** *MA-10379*	$ 70,000/88-89 63,785/89-90 31,892/90-91
1114	**LYE, STEPHEN J.** *Obstetrics and Gynecology, Toronto* Control of myometrial activity during pregnancy and parturition **1990-91 EP Apr 90–Sep 90** *MA-9244*	$ 157,152/85-89 44,125/89-90 22,276/90-91
1115	**MACDONALD, JOHN F.** *Physiology, Toronto* Intra- and extra-cellular regulation of excitatory amino acid receptors and ion channels in mammalian neurons **1990-91 EP Apr 90–Dec 90** *MA-7216*	$ 435,987/79-89 115,418/89-90 69,787/90-91
1116	**MACGILLIVRAY, ROSS T.A.** *Biochemistry, British Columbia* Studies of the disorders of hemostasis **1990-91 EP Apr 90–Mar 91** *MT-7716*	$ 401,718/82-89 104,725/89-90 123,085/90-91
1117	**MACGILLIVRAY, ROSS T.A.** *Biochemistry, British Columbia* Biochemistry of ceruloplasmin **1990-91 EP Apr 90–Mar 91** *MT-10317*	$ 64,195/88-89 64,195/89-90 64,195/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1118	**MACKAY, WILLIAM A.** ***Physiology, Toronto*** Role of parietal cortex in visually guided movement **1990-91 EP Apr 90–Mar 91** *MA-9695*	$ 118,024/86-89 38,805/89-90 38,805/90-91	1127	**MACMILLAN, VERNON H.** ***Medicine, Toronto*** Pathophysiology of hypoxic-ischemic brain damage: neurochemical mediators *MA-4883*	$ 772,626/72-89 69,491/89-90 48,644/90-91
1119	**MACKENZIE, ALEXANDER E.** ***Pediatrics, Ottawa*** Molecular genetics of malignant hyperthermia *1990-91 expenditure breakdown: research support, $39,111; equipment, $17,773* **1990-91 EP Jul 90–Mar 91** *MT-11030*	$ 56,884/90-91	1128	**MACPHERSON, JANE M.** ***Anatomy, Queen's*** Control of posture and stance in the cat **1990-91 EP Apr 90–Jun 90** *MA-9835*	$ 94,102/87-89 99,499/89-90 13,752/90-91
1120	**MACKENZIE, LESLIE W.** ***Anatomy, Queen's*** Biomolecular processes regulating human myometrial contractility *1990-91 expenditure breakdown: research support, $36,225; equipment, $13,000* **1990-91 EP Jul 90–Mar 91** *MA-10984*	$ 49,225/90-91	1129	**MACVICAR, BRIAN A.** ***Medical Physiology, Calgary*** Synaptic and non-synaptic modulation of neuronal excitability **1990-91 EP Apr 90–Mar 91** *MA-8545*	$ 278,176/84-89 84,045/89-90 84,045/90-91
1121	**MACKENZIE, ROBERT E.** ***Biochemistry, McGill*** Multifunctional folate-dependent enzymes **1990-91 EP Apr 90–Mar 91** *MT-4479*	$ 944,675/71-89 102,959/89-90 103,958/90-91	1130	**MACVICAR, BRIAN A.** **PITTMAN, QUENTIN J.** ***Medical Physiology, Calgary*** Electrophysiology and synaptic physiology of neuroendocrine cells **1990-91 EP Apr 90–Mar 91** *MA-9842*	$ 49,978/87-89 34,545/89-90 38,143/90-91
1122	**MACKIE, GEORGE A.** ***Biochemistry, Western Ontario*** Structure and regulation of the genes for ribosomal proteins **1990-91 EP Apr 90–Mar 91** *MT-5396*	$ 755,347/74-89 88,692/89-90 89,553/90-91	1131	**MADSEN, NEIL B.** ***Biochemistry, Alberta*** Structure-function relationships and regulation of enzymes associated with glycogen metabolism **1990-91 EP Apr 90–Mar 91** *MT-1414*	$ 1,929,576/73-89 157,390/89-90 171,419/90-91
1123	**MACKINNON, SUSAN E.** **HUDSON, ALAN R.** ***Surgery, Toronto*** The surgical management of the nerve gap **1990-91 EP Apr 90–Mar 91** *MA-9265*	$ 191,461/85-89 64,782/89-90 64,969/90-91	1132	**MAGDER, SHELDON A.** ***Medicine, McGill*** Adaptations of the peripheral vasculature during shock and hyperthermia *MA-7846*	$ 206,403/82-89 47,856/89-90 21,054/90-91
1124	**MACKLEM, PETER T.** ***Medicine, McGill*** Studies in respiratory mechanics *1990-91 expenditure breakdown: research support, $107,052; equipment, $3,706* **1990-91 EP Apr 90–Mar 91** *MT-3011*	$ 1,534,523/68-89 97,706/89-90 110,758/90-91	1133	**MAGER, DIXIE L.** ***Medical Genetics, British Columbia*** Functional analysis of retrovirus-like elements in the human genome **1990-91 EP Jul 90–Mar 91** *MT-10825*	$ 59,766/90-91
1125	**MACLENNAN, DAVID H.** ***Banting and Best Department of Medical Research, Toronto*** Resolution, characterization, biosynthesis and gene cloning of sarcoplasmic reticulum proteins **1990-91 EP Apr 90–Mar 91** *MT-3399*	$ 1,777,318/68-89 216,450/89-90 197,663/90-91	1134	**MAHURAN, DON J.** ***Clinical Biochemistry, Toronto*** Structure, function and subcellular processing of a lysosomal enzyme: beta-hexosaminidase **1990-91 EP Apr 90–Mar 91** *MA-10435*	$ 105,750/88-89 141,000/89-90 141,000/90-91
1126	**MACLUSKY, NEIL J.** ***Obstetrics and Gynecology, Toronto*** Gonadal steroids and brain development **1990-91 EP Jul 90–Sep 90** *MT-10849*	$ 13,059/90-91	1135	**MAK, ALAN S.-L.** ***Biochemistry, Queen's*** Thin filament regulation of striated and smooth muscle **1990-91 EP Apr 90–Mar 91** *MT-7718*	$ 266,747/82-89 48,944/89-90 52,616/90-91
			1136	**MAK, TAK W.** ***Medical Biophysics, Toronto*** T cell receptor genes in normal, malignant and autoimmune states **1990-91 EP Apr 90–Mar 91** *MT-6381*	$ 1,139,211/78-89 196,574/89-90 196,574/90-91

List No.	Grant/Award	Financial History
1137	**MAK, TAK W.** ***Medical Biophysics, Toronto*** Human immunodeficiency virus: mechanism of cell kill; functional interactions of its receptor CD4 **1990-91 EP Apr 90–Mar 91** *MA-10080*	$ 131,250/87-89 78,300/89-90 79,400/90-91
1138	**MAKI, BRIAN E.** **FERNIE, GEOFFREY R.** ***Surgery, Toronto*** Co-contraction and postural control **1990-91 EP Apr 90–Mar 91** *MT-10576*	$ 70,648/89-90 46,000/90-91
1139	**MALER, LEONARD** **SAS, EMILIA** ***Anatomy, Ottawa*** Feedback in the electrosensory system: anatomy, neurotransmitters and in vitro physiology **1990-91 EP Apr 90–Mar 91** *MT-6027*	$ 473,420/77-89 61,145/89-90 61,739/90-91
1140	**MALER, LEONARD** ***Anatomy, Ottawa*** Development of topographic maps in the brain **1990-91 EP Apr 90–Mar 91** *MA-9696*	$ 120,596/86-89 41,284/89-90 18,946/90-91
1141	**MALER, LEONARD** ***Anatomy, Ottawa*** Peptidergic regulation of the neuronal circuitry controlling communicatory behaviour **1990-91 EP Apr 90–Mar 91** *MT-10530*	$ 72,978/89-90 63,840/90-91
1142	**MALO, CHRISTIANE** ***Physiologie, Montréal*** Ontogenèse et régulation des fonctions membranaires des entérocytes **1990-91 EP avr 90–mar 91** *MA-8923*	$ 206,651/84-89 60,640/89-90 60,640/90-91
1143	**MALOUIN, FRANCOIS** ***Microbiologie, Laval*** Studies on the mechanisms of non-beta-lactamase-mediated beta-lactam resistance and tolerance in Haemophilus influenzae **1990-91 EP jlt 90–mar 91** *MA-10905*	$ 35,130/90-91
1144	**MAN, RICKY Y.K.** ***Pharmacology and Therapeutics, Manitoba*** Effects of pharmacological agents on lysophospholipid metabolism in the mammalian heart **1990-91 EP Apr 90–Mar 91** *MT-9451*	$ 144,406/85-89 40,973/89-90 45,422/90-91
1145	**MAN, S.F. PAUL** ***Medicine, Alberta*** Sodium channels in human airway epithelial cells **1990-91 EP Jul 90–Mar 91** *MT-10894*	$ 38,475/90-91
1146	**MANJUNATH, PUTTASWAMY** ***Médecine, Montréal*** Apolipoprotein A-I binding proteins *1990-91 ventilation des dépenses: aide à la recherche, $34,534; appareils, $7,126* **1990-91 EP jlt 90–mar 91** *MA-10901*	$ 41,660/90-91
1147	**MANJUNATH, PUTTASWAMY** ***Médecine, Montréal*** Biochemical characterization of novel proteins from the reproductive tract **1990-91 EP avr 90–mar 91** *MA-10002*	$ 81,320/87-89 50,700/89-90 39,600/90-91
1148	**MARCEAU, FRANCOIS** ***Pharmacologie, Laval*** The tissue actions of kinins in some experimental pathologies **1990-91 EP avr 90–mar 91** *MA-9358*	$ 146,042/85-89 42,455/89-90 43,451/90-91
1149	**MARCEAU, NORMAND** ***Médecine, Laval*** Cytokeratins and epithelial cell differentiation *1990-91 ventilation des dépenses: aide à la recherche, $67,477; appareils, $10,225* **1990-91 EP avr 90–mar 91** *MT-9284*	$ 198,519/85-89 60,935/89-90 77,702/90-91
1150	**MARCHAND, RAYMOND** ***Anatomie, Laval*** Etude de l'ontogenèse du système nerveux central; étude de la régénération nerveuse centrale après co-implantation d'hydrogels semi-synthétiques avec des cellules nerveuses immatures **1990-91 EP avr 90–mar 91** *MA-6797*	$ 252,289/81-89 35,371/89-90 35,371/90-91
1151	**MARKS, ALEXANDER** ***Banting and Best Department of Medical Research, Toronto*** Studies on S100 protein, a brain protein, in rat glial cells and Down's syndrome **1990-91 EP Apr 90–Mar 91** *MT-8067*	$ 229,701/83-89 46,968/89-90 46,968/90-91
1152	**MARKS, GERALD S.** ***Pharmacology and Toxicology, Queen's*** Studies of the mechanism of action of porphyria-inducing drugs **1990-91 EP Apr 90–Mar 91** *MT-1417*	$ 1,074,248/63-89 82,572/89-90 83,439/90-91
1153	**MARLISS, ERROL B.** ***Medicine, McGill*** The spontaneously diabetic BB rat **1990-91 EP Apr 90–Mar 91** *MA-6540*	$ 525,098/78-89 78,795/89-90 78,986/90-91
1154	**MARLISS, ERROL B.** ***Medicine, McGill*** Metabolic responses to intense exercise in normal and type I diabetic humans **1990-91 EP Apr 90–Mar 91** *MA-9581*	$ 121,626/85-89 52,500/89-90 52,500/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1155	**MARQUIS, GABRIEL L.A.** **HALLENBECK, PATRICK C.** *Microbiologie et immunologie, Montréal* Antigènes et immunorégulation dans un modèle expérimental de cryptococcose murine *MA-10318*	$ 45,000/88-89 45,000/89-90 19,688/90-91
1156	**MARRIE, THOMAS J.** *Medicine, Dalhousie* **HALDANE, DAVID J.M.** *Microbiology, Dalhousie* **BEZANSON, GREGORY S.** *Microbiology, Dalhousie* Origins and development of nosocomial legionellosis **1990-91 EP Apr 90–Mar 91** *MT-10577*	$ 40,320/89-90 45,693/90-91
1157	**MARSHALL, JEAN S.** *Pathology, McMaster* The chronic activation of effector cells in allergy *1990-91 expenditure breakdown: research support, $45,684; equipment, $10,000* **1990-91 EP Jul 90–Mar 91** *MT-10966*	$ 55,684/90-91
1158	**MARSHALL, KENNETH C.** *Physiology, Ottawa* Metabolic interrelations with contraction and ion flux in muscle *MA-0625*	$ 666,707/58-89 47,155/89-90 38,314/90-91
1159	**MARSHALL, KENNETH C.** *Physiology, Ottawa* Studies of synaptic transmission **1990-91 EP Apr 90–Mar 91** *MT-6798*	$ 357,631/81-89 81,113/89-90 64,015/90-91
1160	**MARSHALL, WILLIAM H.** *Immunology, Memorial University of Newfoundland* **LARSEN, BODIL A.** *Immunology, Memorial University of Newfoundland* **YOUNGHUSBAND, H. BANFIELD** *Molecular Biology, Memorial University of Newfoundland* Study of mechanisms in immunopathology **1990-91 EP Apr 90–Mar 91** *MA-10531*	$ 39,375/89-90 52,500/90-91
1161	**MARTEL-PELLETIER, JOHANNE** *Médecine, Montréal* Ostéoarthrose humaine: étude des mécanismes régulateurs des métalloprotéases **1990-91 EP avr 90–mar 91** *MT-7491*	$ 278,561/81-89 60,572/89-90 68,466/90-91
1162	**MARTH, JAMEY D.** *Medical Genetics, British Columbia* Hemopoietic gene function in transgenic mice *1990-91 expenditure breakdown: research support, $52,500; equipment, $5,500* **1990-91 EP Jul 90–Mar 91** *MA-11008*	$ 58,000/90-91
1163	**MARTIN, GARRY L.** *Psychology, Manitoba* Investigations of training and production technologies for developing vocational competencies of severely retarded persons **1990-91 EP Apr 90–Mar 91** *MT-6353*	$ 460,669/76-89 46,600/89-90 39,400/90-9
1164	**MARTIN, JAMES G.** *Medicine, McGill* **RENZI, PAOLO M.** *Médecine, Montréal* The lymphocyte and airway reactivity **1990-91 EP Apr 90–Mar 91** *MA-10637*	[illegible] ,780,[illegible]
1165	**MARTIN, JAMES G.** *Medicine, McGill* Mechanisms of airway reactivity **1990-91 EP Apr 90–Mar 91** *MA-7852*	$ 275,946/82-89 67,000/89-90 67,000/90-91
1166	**MARTIN, JAMES G.** **POWELL, WILLIAM S.** *Medicine, McGill* Late phase reactions and airway reactivity **1990-91 EP Apr 90–Mar 91** *MA-10381*	$ 33,911/88-89 33,911/89-90 40,905/90-91
1167	**MARTIN, RENEE H.** *Pediatrics, Calgary* Cytogenetic analysis of human sperm **1990-91 EP Apr 90–Mar 91** *MT-7961*	$ 443,568/83-89 115,000/89-90 115,000/90-91
1168	**MARTIN-IVERSON, MATHEW T.** *Psychiatry, Alberta* Role of dopamine in an animal model of stimulant psychoses **1990-91 EP Jul 90–Mar 91** *MA-11084*	$ 30,975/90-91
1169	**MASSEY, THOMAS E.** *Pharmacology and Toxicology, Queen's* Pulmonary biotransformation and toxicity of aflatoxin B1 *1990-91 expenditure breakdown: research support, $47,723; equipment, $11,000* **1990-91 EP Apr 90–Mar 91** *MT-10382*	$ 49,185/88-89 44,414/89-90 58,723/90-91
1170	**MATHERS, DAVID A.** *Physiology, British Columbia* The nature of receptors for taurine and beta-alanine at the membrane of mouse spinal cord neurons studied in vitro *MA-7720*	$ 227,967/82-89 36,116/89-90 25,281/90-91
1171	**MATHESON, DAVID S.** *Pediatrics, British Columbia* Studies in the pathogenesis of hypogammaglobulinemia **1990-91 EP Apr 90–Mar 91** *MA-9546*	$ 165,750/85-89 51,000/89-90 53,700/90-91

List No.	Grant/Award	Financial History
1172	**MATHESON, GORDON O.** *Family Practice, British Columbia* **MCKENZIE, DONALD C.** *Physical Education and Recreation, British Columbia* **ALLEN, PETER S.** *Applied Sciences in Medicine, Alberta* In vivo phosphorus-31 nuclear magnetic resonance spectroscopy of human skeletal muscle *MA-10319*	$ 36,300/88-89 36,300/89-90 15,881/90-91
1173	**MATLASHEWSKI, GREGORY J.** *Parasitology, McGill* Macrophage gene expression **1990-91 EP Apr 90–Mar 91** *MA-10532*	$ 48,250/89-90 51,000/90-91
1174	**MATSUBARA, JOANNE A.** *Ophthalmology, British Columbia* Intrinsic connections in visual cortex **1990-91 EP Apr 90–Mar 91** *MA-9150*	$ 148,856/85-89 45,491/89-90 49,105/90-91
1175	**MATUSIK, ROBERT J.** *Physiology, Manitoba* Hormonal regulation of gene expression in the prostate **1990-91 EP Apr 90–Jun 90** *MA-7317*	$ 353,556/80-89 40,317/89-90 9,486/90-91
1176	**MATUSIK, ROBERT J.** *Physiology, Manitoba* Regulation of gene expression in the prostate **1990-91 EP Jul 90–Mar 91** *MT-10978*	$ 57,750/90-91
1177	**MAUK, A. GRANT** *Biochemistry, British Columbia* Structural determinants of heme protein function **1990-91 EP Apr 90–Mar 91** *MT-7182*	$ 351,996/79-89 47,618/89-90 47,000/90-91
1178	**MAYSINGER, DUSICA** *Pharmacology and Therapeutics, McGill* Nerve growth factor effects on neurotransmitter release in vivo following cortical lesions **1990-91 EP Apr 90–Mar 91** *MA-10533*	$ 61,159/89-90 45,545/90-91
1179	**MAZER, C. DAVID** *Anesthesia, Toronto* Anesthesia and the stunned myocardium **1990-91 EP Apr 90–Mar 91** *MA-10534*	$ 22,428/89-90 26,822/90-91
1180	**MAZIADE, MICHEL** **RAYMOND, VINCENT** *Psychiatrie, Laval* Epidemiological and genetic components of schizophrenia and affective disorder in large pedigrees of eastern Québec **1990-91 EP jlt 90–mar 91** *MT-10892*	$ 74,175/90-91
1181	**MCALPINE, PHYLLIS J.** *Human Genetics, Manitoba* The relative positions of gene loci in man **1990-91 EP Apr 90–Mar 91** *MT-6112*	$ 1,058,385/77-89 122,000/89-90 122,000/90-91
1182	**MCBRIDE, BARRY C.** *Microbiology, British Columbia* Studies on adhesins and proteases of oral bacteria **1990-91 EP Apr 90–Mar 91** *MT-4434*	$ 959,684/71-89 137,887/89-90 141,036/90-91
1183	**MCBURNEY, MICHAEL W.** *Medicine, Ottawa* Molecular basis of X chromosome inactivation in female cells **1990-91 EP Apr 90–Mar 91** *MT-5859*	$ 613,860/76-89 106,165/89-90 106,165/90-91
1184	**MCCLARTY, GRANT A.** *Medical Microbiology, Manitoba* Reduction of ribonucleotides in chlamydiae *1990-91 expenditure breakdown: research support, $49,137; equipment, $19,000* **1990-91 EP Jul 90–Mar 91** *MT-10866*	$ 68,137/90-91
1185	**MCCREA, DAVID A.** *Physiology, Manitoba* Mechanisms of hyperreflexia following spinal transection **1990-91 EP Apr 90–Mar 91** *MT-7932*	$ 237,318/83-89 52,071/89-90 49,325/90-91
1186	**MCCULLOCH, CHRISTOPHER A.G.** *Dentistry, Toronto* Cell kinetics of periodontal fibroblasts **1990-91 EP Apr 90–Mar 91** *MA-8903*	$ 246,616/84-89 105,000/89-90 103,022/90-91
1187	**MCCULLOCH, ERNEST A.** **MINDEN, MARK D.** *Medicine, Toronto* The biology of blast cells in acute myeloblastic leukemia *MA-1420*	$ 1,807,331/63-89 84,048/89-90 68,493/90-91
1188	**MCDERMOTT, MARK R.** *Pathology, McMaster* Mucosal vaccination against herpes simplex virus type 2 *1990-91 expenditure breakdown: research support, $57,604; equipment, $1,599* **1990-91 EP Apr 90–Mar 91** *MT-8650*	$ 241,960/84-89 54,000/89-90 59,203/90-91
1189	**MCDONALD, TERENCE F.** *Physiology and Biophysics, Dalhousie* Function and modulation of cardiac ionic channels *1990-91 expenditure breakdown: research support, $66,228; equipment, $2,000* **1990-91 EP Apr 90–Mar 91** *MT-5867*	$ 436,877/76-89 42,533/89-90 68,228/90-91
1190	**MCDONALD, THOMAS J.** *Medicine, Western Ontario* Identification and characterization of regulatory peptides **1990-91 EP Apr 90–Mar 91** *MA-10278*	$ 50,000/88-89 50,000/89-90 53,750/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1191	**MCELHANEY, RONALD N.** *Biochemistry, Alberta* The roles of lipids in biomembrane structure and function **1990-91 EP Apr 90–Mar 91** *MT-4261*	$ 1,143,796/70-89 129,217/89-90 140,607/90-91
1192	**MCERLANE, KEITH M.** *Pharmaceutical Sciences, British Columbia* Stereoselective determination of the pharmacokinetics of mexiletine enantiomers in humans and stereoselective pharmacodynamics in rats *MA-10385*	$ 44,838/88-89 38,838/89-90 19,904/90-91
1193	**MCFADDEN, D. GRANT** *Biochemistry, Alberta* Replication and resolution of cloned poxviral telomeres **1990-91 EP Apr 90–Mar 91** *MT-9675*	$ 136,220/86-89 72,580/89-90 86,176/90-91
1194	**MCGANN, LOCKSLEY E.** *Pathology, Alberta* Cryoprotection in cells and tissues *1990-91 expenditure breakdown: research support, $64,898; equipment, $12,000* **1990-91 EP Apr 90–Mar 91** *MT-7934*	$ 283,517/83-89 56,651/89-90 76,898/90-91
1195	**MCGEER, EDITH G.** **MCGEER, PATRICK L.** *Psychiatry, British Columbia* Pathological findings in positron emission tomography-scanned cases of Alzheimer's disease and related disorders and normal controls **1990-91 EP Jul 90–Mar 91** *MT-11040*	$ 48,191/90-91
1196	**MCGEER, PATRICK L.** *Psychiatry, British Columbia* Immune element complexes in Parkinson's disease brains **1990-91 EP Apr 90–Mar 91** *MT-10535*	$ 55,106/89-90 70,275/90-91
1197	**MCGHEE, JAMES D.** *Medical Biochemistry, Calgary* Molecular biology of early development **1990-91 EP Apr 90–Mar 91** *MA-9547*	$ 240,174/85-89 145,000/89-90 145,000/90-91
1198	**MCINNES, RODERICK R.** *Pediatrics, Toronto* A molecular genetic analysis of two amino acid lyases **1990-91 EP Apr 90–Mar 91** *MT-7315*	$ 480,194/80-89 73,542/89-90 77,932/90-91
1199	**MCKEE, NANCY H.** *Surgery, Toronto* Skeletal muscle: contractile function following acute ischemia **1990-91 EP Apr 90–Mar 91** *MA-10536*	$ 45,713/89-90 55,750/90-91

N° de liste	Subvention/Bourse	Résumé financier
1200	**MCLACHLAN, DONALD R.** *Physiology, Toronto* Gene expression in Alzheimer's disease **1990-91 EP Apr 90–Mar 91** *MA-9534*	$ 219,366/85-89 54,535/89-90 55,029/90-91
1201	**MCLEAN, JOHN H.** *Basic Medical Sciences, Memorial University of Newfoundland* The role of afferent input in a developing cortical target *1990-91 expenditure breakdown: research support, $35,735; equipment, $16,657* **1990-91 EP Jul 90–Mar 91** *MT-10931*	$ 52,392/90-91
1202	**MCLENNAN, HUGH** *Physiology, British Columbia* Physiological and pharmacological studies on acidic amino acids in the central nervous system **1990-91 EP Apr 90–Jun 90** *MT-2980*	$ 1,591,749/68-89 78,943/89-90 16,392/90-91
1203	**MCMASTER, W. ROBERT** *Medical Genetics, British Columbia* Studies in molecular immunology **1990-91 EP Apr 90–Mar 91** *MT-7399*	$ 527,310/80-89 102,361/89-90 102,361/90-91
1204	**MCMURRAY, WILLIAM C.** *Biochemistry, Western Ontario* Metabolism of mitochondrial membranes *1990-91 expenditure breakdown: research support, $110,734; equipment, $11,000* **1990-91 EP Apr 90–Mar 91** *MT-1423*	$ 1,103,036/63-89 94,554/89-90 121,734/90-91
1205	**MCNEILL, J. ROBERT** *Pharmacology, Saskatchewan* **GOPALAKRISHNAN, VENKAT** *Pharmacology, Saskatchewan* **SULAKHE, PRAKASH V.** *Physiology, Saskatchewan* **TRIGGLE, CHRISTOPHER R.** *Pharmacology and Therapeutics, Calgary* Cellular and subcellular basis for vascular actions of vasopressin *MA-8465*	$ 146,232/85-89 42,024/89-90 34,247/90-91
1206	**MCNEILL, J. ROBERT** *Pharmacology, Saskatchewan* Role of vasopressin in cardiovascular regulation *1990-91 expenditure breakdown: research support, $53,334; equipment, $850* **1990-91 EP Apr 90–Mar 91** *MT-7725*	$ 269,103/82-89 48,080/89-90 54,184/90-91
1207	**MCNEILL, JOHN H.** *Pharmaceutical Sciences, British Columbia* Endocrine and drug-induced changes in cardiac performance **1990-91 EP Apr 90–Mar 91** *MA-4792*	$ 619,535/72-89 63,036/89-90 65,380/90-91

List No.	Grant/Award	Financial History
1208	**MCNICOL, PATRICIA J.** *Medical Microbiology, Manitoba* **GUIJON, FERNANDO B.** *Obstetrics, Gynecology, and Reproductive Sciences, Manitoba* **BRUNHAM, ROBERT C.** *Medical Microbiology, Manitoba* Human papillomavirus infection and uterine cervical neoplasia *1990-91 expenditure breakdown: research support, $54,786; equipment, $4,634* **1990-91 EP Apr 90–Mar 91** *MA-10222*	$ 52,700/88-89 51,450/89-90 59,420/90-91
1209	**MEANEY, MICHAEL J.K.** *Psychiatry, McGill* Individual differences in the adrenocortical stress response **1990-91 EP Apr 90–Mar 91** *MA-8632*	$ 154,316/84-89 31,600/89-90 31,600/90-91
1210	**MEDDINGS, JONATHAN B.** *Medicine, Calgary* The regulation of microvillus membrane transport processes by membrane fluidity **1990-91 EP Apr 90–Mar 91** *MT-10537*	$ 43,875/89-90 58,500/90-91
1211	**MEIGHEN, EDWARD A.** **GRAHAM, ANGUS F.S.** *Biochemistry, McGill* Regulation and expression of the lux genes from bioluminescent bacteria **1990-91 EP Apr 90–Mar 91** *MT-7672*	$ 505,208/82-89 76,694/89-90 97,464/90-91
1212	**MEIGHEN, EDWARD A.** *Biochemistry, McGill* Regulation of enzymatic function in vivo and in vitro **1990-91 EP Apr 90–Mar 91** *MT-4314*	$ 1,004,671/71-89 102,927/89-90 103,926/90-91
1213	**MELLORS, ALAN** *Chemistry and Biochemistry, Guelph* The chemotherapeutic potential of lipids in African trypanosomiases *MA-6803*	$ 272,557/81-89 57,205/89-90 29,456/90-91
1214	**MELVILL JONES, GEOFFREY** *Physiology, McGill* Adaptive vestibular-visual interactions and their cognitive correlates **1990-91 EP Apr 90–Mar 91** *MA-5630*	$ 951,047/75-89 68,814/89-90 68,814/90-91
1215	**MENARD, DANIEL** *Anatomie et biologie cellulaire, Sherbrooke* Mécanisme régulateur du développement morphologique et fonctionnel du tube digestif foetal humain en culture organotypique *1990-91 ventilation des dépenses: aide à la recherche, $69,524; appareils, $6,310* **1990-91 EP avr 90–mar 91** *MT-3969*	$ 554,399/77-89 66,377/89-90 75,834/90-91
1216	**MENARD, HENRI-A.** *Médecine, Sherbrooke* Savoie/anti-Savoie: un nouveau système immun lié à l'arthrite rhumatoide *1990-91 ventilation des dépenses: aide à la recherche, $55,941; appareils, $3,200* **1990-91 EP avr 90–mar 91** *MA-10387*	$ 71,157/88-89 58,990/89-90 59,141/90-91
1217	**MENEILLY, GRAYDON S.** *Medicine, British Columbia* Effect of aging on carbohydrate metabolism **1990-91 EP Apr 90–Mar 91** *MT-10538*	$ 64,466/89-90 60,576/90-91
1218	**MENEZES, JOSE P.C.A.** *Microbiologie et immunologie, Montréal* Studies of herpesviruses-lymphocytes interactions *MA-6173*	$ 639,641/77-89 89,301/89-90 72,774/90-91
1219	**MENON, I. ARAVINDAKSHAN** *Medicine, Toronto* **BASU, PRASANTA K.** *Ophthalmology, Toronto* Toxic effects of ultraviolet radiation and drugs on ocular tissues **1990-91 EP Jul 90–Mar 91** *MA-10974*	$ 47,855/90-91
1220	**MERALI, ZULFIQUAR** *Psychology, Ottawa* Actions of bombesin-like peptides on food intake: pharmacological mechanisms and physiological role *1990-91 expenditure breakdown: research support, $35,875; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MT-10388*	$ 39,354/88-89 35,500/89-90 45,875/90-91
1221	**MERRIFIELD, PETER A.** *Anatomy, Western Ontario* Development and maintenance of muscle fiber types *MA-9698*	$ 122,110/86-89 49,949/89-90 34,964/90-91
1222	**MES-MASSON, ANNE-MARIE** *Médecine, Montréal* Genetic analysis of the role of polyomavirus large T-antigen in cancer *1990-91 ventilation des dépenses: aide à la recherche, $55,650; appareils, $25,000* **1990-91 EP jlt 90–mar 91** *MT-10959*	$ 80,650/90-91
1223	**MESSNER, HANS A.** *Medicine, Toronto* The role of human pluripotent stem cells in clinical bone marrow transplantation *1990-91 expenditure breakdown: research support, $109,628; equipment, $6,000* **1990-91 EP Apr 90–Mar 91** *MT-6413*	$ 799,728/78-89 93,503/89-90 115,628/90-91
1224	**MEUNIER, HELENE F.** *Clinical Biochemistry, Toronto* Hormonal control of activin/inhibin subunits gene expression **1990-91 EP Apr 90–Mar 91** *MA-10539*	$ 60,000/89-90 60,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1225	**MEZEI, CATHERINE** *Biochemistry, Dalhousie* Myelination in the developing, regenerating, and degenerating peripheral nerve **1990-91 EP Apr 90–Mar 91** *MA-6949*	$ 296,664/81-89 54,818/89-90 56,771/90-91	1232	**MIKELBERG, FREDERICK S.** *Ophthalmology, British Columbia* Measurement of optic nerve axon count and fibre diameter distribution **1990-91 EP Apr 90–Mar 91** *MA-10540*	$ 25,268/89-90 33,691/90-91
1226	**MEZEI, MICHAEL** *Pharmacy, Dalhousie* Investigation of liposomes as a new selective drug delivery system **1990-91 EP Apr 90–Mar 91** *MT-6664*	$ 310,047/79-89 43,761/89-90 43,761/90-91	1233	**MILIC-EMILI, JOSEPH** *Medicine, McGill* Respiratory mechanics and gas exchange in Intensive Care Unit patients **1990-91 EP Apr 90–Mar 91** *MT-3016*	$ 1,108,274/68-89 122,352/89-90 107,595/90-91
1227	**MICHALAK, MAREK S.** *Pediatrics, Alberta* Ryanodine receptor in cardiac sarcoplasmic reticulum **1990-91 EP Apr 90–Mar 91** *MT-10389*	$ 51,160/88-89 51,160/89-90 51,160/90-91	1234	**MILLER, RICHARD G.** *Immunology, Toronto* Studies on cytotoxic T lymphocytes **1990-91 EP Apr 90–Mar 91** *MT-3017*	$ 1,578,058/68-89 130,164/89-90 125,000/90-91
1228	**MICHEL, RENE P.** *Pathology, McGill* Morphological and physiological studies of lung edema and of the pulmonary vasculature **1990-91 EP Apr 90–Mar 91** *MT-7727*	$ 330,562/82-89 63,541/89-90 63,541/90-91	1235	**MILLER, SYDNEY B.** *Psychology, Concordia* **DITTO, W. BLAINE, JR.** *Psychology, McGill* The effects of psychological stress on autonomic activity, sodium retention, and cardiovascular hemodynamics in offspring of hypertensives **1990-91 EP Jul 90–Mar 91** *MA-10932*	$ 18,579/90-91
1229	**MICHOUD, MARIE-CLAIRE** *Médecine, Montréal* **DU SOUICH, PATRICK P.** *Pharmacologie, Montréal* **LAROCHELLE, PIERRE** *Pharmacologie, Montréal* **AMYOT, ROBERT** *Médecine, Montréal* Role of the non-adrenergic non-cholinergic nervous system and of the atrial natriuretic peptide on pulmonary function in normal and asthmatic individuals **1990-91 EP avr 90–mar 91** *MA-10324*	$ 25,393/88-89 25,393/89-90 29,950/90-91	1236	**MILLS, GORDON B.** *Obstetrics and Gynecology, Toronto* Regulation of T lymphocyte proliferation by interleukin 2 **1990-91 EP Apr 90–Mar 91** *MA-9867*	$ 125,809/86-89 92,269/89-90 99,816/90-91
1230	**MICHOUD, MARIE-CLAIRE** *Médecine, Montréal* **DURANCEAU, ANDRE C.H.** *Chirurgie, Montréal* **AMYOT, ROBERT** *Médecine, Montréal* **DU SOUICH, PATRICK P.** *Pharmacologie, Montréal* Asthma and gastroesophageal reflux **1990-91 EP avr 90–jui 90** *MA-10295*	$ 13,000/88-89 13,000/89-90 3,250/90-91	1237	**MILNER, BRENDA A.** *Neurology and Neurosurgery, McGill* Behavioural effects of focal brain lesions in man **1990-91 EP Apr 90–Mar 91** *MT-2624*	$ 1,374,846/67-89 101,593/89-90 103,884/90-91
1231	**MICKLE, DONALD A.G.** *Clinical Biochemistry, Toronto* **INGOLD, KEITH U.** *Chemistry, National Research Council of Canada (Ottawa)* Free radical injury during reperfusion of the regionally ischemic canine myocardium **1990-91 EP Apr 90–Mar 91** *MT-10392*	$ 46,375/88-89 46,375/89-90 46,375/90-91	1238	**MILOS, NADINE C.** *Dentistry, Alberta* Neural crest lectins and birth defects **1990-91 EP Apr 90–Mar 91** *MT-9549*	$ 147,262/85-89 48,491/89-90 59,848/90-91
			1239	**MINDEN, MARK D.** *Medicine, Toronto* Identification and isolation of genetic rearrangement in human leukemia **1990-91 EP Apr 90–Mar 91** *MA-8055*	$ 306,748/83-89 73,542/89-90 85,774/90-91
			1240	**MINK, STEVEN N.** *Medicine, Manitoba* Factors affecting wave-speed limit on expiratory flow *1990-91 expenditure breakdown: research support, $40,072; equipment, $5,520* **1990-91 EP Apr 90–Mar 91** *MT-7964*	$ 165,949/83-89 32,569/89-90 45,592/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1241	**MINTA, JOE O.** *Pathology, Toronto* Regulation of expression of complement factor I (C3b/C4b inactivator) *1990-91 expenditure breakdown: research support, $70,625; equipment, $4,000* **1990-91 EP Apr 90–Mar 91** *MA-10394*	$ 68,000/88-89 68,000/89-90 74,625/90-91	1251	**MOGER, WILLIAM H.** *Physiology and Biophysics, Dalhousie* Regulation of Leydig cell steroidogenesis **1990-91 EP Apr 90–Mar 91** *MT-5401*	$ 636,014/74-89 68,000/89-90 68,000/90-91
1242	**MINUK, GERALD Y.** *Medicine, Manitoba* GABA/polyamines and hepatic regeneration **1990-91 EP Apr 90–Mar 91** *MT-10342*	$ 52,000/88-89 52,000/89-90 57,591/90-91	1252	**MOLDAY, ROBERT S.** *Biochemistry, British Columbia* Structure and function of cell surface membranes and receptors **1990-91 EP Apr 90–Mar 91** *MT-5822*	$ 922,985/76-89 113,016/89-90 114,113/90-91
1243	**MIRAULT, MARC-EDOUARD** *Médecine, Laval* Antioxidant defence enhancement in transgenic human cells and transgenic mice *MA-10395*	$ 34,831/88-89 46,000/89-90 20,125/90-91	1253	**MOLOTCHNIKOFF, STEPHANE** *Biologie, Montréal* Etude des interactions latérales du cortex visuel **1990-91 EP avr 90–mar 91** *MT-10542*	$ 43,513/89-90 39,350/90-91
1244	**MISHRA, RAM K.** *Psychiatry, McMaster* Central nervous system dopamine receptors and adenylate cyclase **1990-91 EP Apr 90–Mar 91** *MT-6237*	$ 478,644/77-89 88,016/89-90 62,767/90-91	1254	**MONTPLAISIR, JACQUES Y.** *Psychiatrie, Montréal* Epilepsie et sommeil **1990-91 EP avr 90–mar 91** *MT-7319*	$ 349,173/80-89 50,900/89-90 50,900/90-91
1245	**MITCHELL, ALAN G.** *Pharmaceutical Sciences, British Columbia* Effects of crystal anisotropy and crystal defects *1990-91 expenditure breakdown: research support, $38,343; equipment, $5,000* **1990-91 EP Apr 90–Mar 91** *MT-7098*	$ 222,807/79-89 35,195/89-90 43,343/90-91	1255	**MONTPLAISIR, JACQUES Y.** *Psychiatrie, Montréal* Physiopathologie de l'hypersomnie et d'autres troubles du sommeil **1990-91 EP avr 90–mar 91** *MT-6472*	$ 417,722/78-89 57,783/89-90 58,344/90-91
1246	**MITCHELL, B.F. PETER** *Obstetrics and Gynecology, Alberta* Hormonal functions of human fetal membranes **1990-91 EP Apr 90–Mar 91** *MA-7731*	$ 244,049/82-89 55,673/89-90 51,745/90-91	1256	**MONTPLAISIR, JACQUES Y.** *Psychiatrie, Montréal* Le syndrome des apnées au cours du sommeil: rôle de l'hypersomnie et de l'anoxie cérébrale dans la genèse des troubles cognitifs **1990-91 EP jlt 90–mar 91** *MA-11051*	$ 41,348/90-91
1247	**MITCHELL, GRANT A.** *Pédiatrie, Montréal* Molecular biology of two mitochondrial inborn errors of metabolism **1990-91 EP avr 90–mar 91** *MT-10541*	$ 74,665/89-90 70,486/90-91	1257	**MOODY-CORBETT, FRANCES I.** *Physiology, Memorial University of Newfoundland* Voltage sensitive ion channels on embryonic Xenopus muscle *MA-9618*	$ 134,584/85-89 28,694/89-90 14,706/90-91
1248	**MIYAMOTO, NEIL G.** *Medical Biophysics, Toronto* Regulation of transcription of the human lck gene **1990-91 EP Jul 90–Mar 91** *MT-10906*	$ 54,944/90-91	1258	**MOOKERJEA, SAILEN S.** *Biochemistry, Memorial University of Newfoundland* Role of glycosylated and unglycosylated C-reactive proteins on membrane-related functions **1990-91 EP Apr 90–Mar 91** *MT-10396*	$ 60,000/88-89 60,000/89-90 63,000/90-91
1249	**MOFFAT, MARGARET P.** *Pharmacology and Toxicology, Western Ontario* Na+/H+ exchange and ischemia/reperfusion injury and arrhythmias **1990-91 EP Apr 90–Mar 91** *MA-9300*	$ 129,079/85-89 40,698/89-90 37,463/90-91	1259	**MOOKERJEA, SAILEN S.** *Biochemistry, Memorial University of Newfoundland* Control of glycoprotein metabolism; physiological functions of soluble and membrane bound glycosyltransferases **1990-91 EP Apr 90–Mar 91** *MT-2166*	$ 1,130,746/66-89 92,453/89-90 94,758/90-91
1250	**MOGENSON, GORDON J.** *Physiology, Western Ontario* The role of nervous and endocrine systems in the control of behaviour **1990-91 EP Apr 90–Mar 91** *MT-1866*	$ 1,066,508/65-89 94,554/89-90 80,118/90-91			

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1260	**MOORE, SEAN** **ALAVI, MISBAHUDDIN Z.** *Pathology, McGill* The effect of injury-induced changes in the arterial wall proteoglycans in atherogenesis **1990-91 EP Apr 90–Mar 91** *MT-10590*	$ 58,734/89-90 78,312/90-91
1261	**MOORJANI, SITAL** *Biochimie, Laval* **PATEL, PRAVIN C.** *Institut Armand-Frappier (Laval-des-Rapides)* **LUPIEN, PAUL J.** *Médecine, Laval* Apo E polymorphism, LDL metabolism and coronary heart disease in familial hypercholesterolemia **1990-91 EP avr 90–mar 91** *MA-10591*	$ 44,847/89-90 48,758/90-91
1262	**MORAIS, REJEAN** *Biochimie, Montréal* La contribution du génome mitochondrial au phénotype des cellules de vertébrés **1990-91 EP avr 90–mar 91** *MT-6030*	$ 508,979/77-89 57,000/89-90 57,000/90-91
1263	**MORALES, CARLOS R.** *Anatomy, McGill* Molecular studies in the rat testis **1990-91 EP Apr 90–Mar 91** *MT-10343*	$ 48,438/88-89 48,438/89-90 52,272/90-91
1264	**MORAN, LAURENCE A.** *Biochemistry, Toronto* The mouse HSP70 multigene family **1990-91 EP Apr 90–Mar 91** *MA-7183*	$ 422,686/79-89 63,945/89-90 63,945/90-91
1265	**MOREAU, MARC J.** *Surgery, Alberta* **BUDNEY, DAVID R.** *Mechanical Engineering, Alberta* **RASO, V. JAMES** *Glenrose Rehabilitation Hospital (Edmonton)* Functional requirements of spinal devices *MA-9218*	$ 70,090/85-89 29,933/89-90 20,953/90-91
1266	**MORGAN, A. RICHARD** *Biochemistry, Alberta* DNA replication, recombination, repair **1990-91 EP Apr 90–Mar 91** *MT-3758*	$ 879,124/69-89 96,572/89-90 96,572/90-91
1267	**MORGAN, WILLIAM D.** *Biology, McGill* Biochemical characterization of human heat shock transcription factor *MA-10344*	$ 54,725/88-89 42,000/89-90 21,525/90-91
1268	**MORGUNOV, NIKOLAS S.** *Physiology and Biophysics, Dalhousie* **HIRSCH, DAVID J.** *Medicine, Dalhousie* Neurogenic and environmental modulation of renal tubular transport **1990-91 EP Apr 90–Mar 91** *MA-8740*	$ 194,478/84-89 52,875/89-90 52,875/90-91
1269	**MORISSET, JEAN** *Biologie, Sherbrooke* Dynamique des récepteurs cholinergiques et peptidiques du pancréas dans des conditions physiologiques et pathologiques *1990-91 ventilation des dépenses: aide à la recherche, $60,411; appareils, $23,500* **1990-91 EP avr 90–mar 91** *MT-7320*	$ 405,357/70-89 71,746/89-90 83,911/90-91
1270	**MORISSET, JEAN** *Biologie, Sherbrooke* Le rôle integré de la secrétion exocrine pancréatique non parallèle dans la digestion *1990-91 ventilation des dépenses: aide à la recherche, $41,700; appareils, $3,000* **1990-91 EP jlt 90–mar 91** *MT-11032*	$ 44,700/90-91
1271	**MORLEY, THOMAS P.** *Surgery, Toronto* **BERGERON, CATHERINE** *Pathology, Toronto* **SEEMAN, PHILIP** *Pharmacology, Toronto* **MCLACHLAN, DONALD R.** *Physiology, Toronto* **DECK, JOHN H.N.** *Pathology, Toronto* Support for the Canadian Brain Tissue Bank **1990-91 EP Apr 90–Mar 91** *MA-7957*	$ 263,356/83-89 63,036/89-90 68,412/90-91
1272	**MOROZ, LEONARD A.** *Medicine, McGill* Fibrinolytic mechanisms *MA-2844*	$ 1,177,532/67-89 98,756/89-90 50,852/90-91
1273	**MORRIS, GERALD P.** *Biology, Queen's* Studies on gastrointestinal ulcers **1990-91 EP Apr 90–Mar 91** *MA-10070*	$ 80,500/87-89 84,430/89-90 66,653/90-91
1274	**MORRIS, MARY E.** *Medicine, Ottawa* Transmission in the central nervous system: ionic mechanisms of anesthesia and neurotransmitters **1990-91 EP Apr 90–Mar 91** *MT-4604*	$ 674,814/72-89 88,066/89-90 61,565/90-91
1275	**MORRISH, DONALD W.** *Medicine, Alberta* **LIN, CHYI-CHYANG** *Pathology, Alberta* Regulation of placental growth, differentiation, and peptide hormone secretion **1990-91 EP Apr 90–Mar 91** *MA-9550*	$ 147,632/85-89 50,176/89-90 50,176/90-91
1276	**MORROW, ROBERT J.** *Obstetrics and Gynecology, Toronto* Umbilical arterial velocity waveforms and fetal health **1990-91 EP Jul 90–Sep 90** *MA-10592*	$ 20,625/90-91

List No.	Grant/Award	Financial History
1277	**MORTIMER, DAVID** ***Obstetrics and Gynecology, Calgary*** Physiological regulation of human sperm fertilizing ability **1990-91 EP Apr 90–Jun 90** *MA-9817*	$ 87,300/87-89 37,104/89-90 8,730/90-91
1278	**MORTIMER, DAVID** **PATTINSON, HOWARD A.** **JARRELL, JOHN F.** ***Obstetrics and Gynecology, Calgary*** Comprehensive assessment of sperm function in male infertility using a novel diagnostic protocol **1990-91 EP Jul 90–Mar 91** *MA-10926*	$ 66,000/90-91
1279	**MORTOLA, JACOPO P.** ***Physiology, McGill*** Hypoxia and neonatal respiration **1990-91 EP Apr 90–Mar 91** *MT-6665*	$ 352,466/79-89 61,500/89-90 61,500/90-91
1280	**MOSCARELLO, MARIO A.** ***Biochemistry, Toronto*** The role of the Golgi complex in glycoprotein biosynthesis in health and disease **1990-91 EP Apr 90–Mar 91** *MT-8679*	$ 304,496/84-89 75,000/89-90 75,000/90-91
1281	**MOSMANN, TIMOTHY R.** ***Immunology, Alberta*** The immunoregulatory role of T cell types secreting different cytokine patterns **1990-91 EP Dec 90–Mar 91** *MT-10867*	$ 51,666/90-91
1282	**MOSMANN, TIMOTHY R.** ***Immunology, Alberta*** T cell receptor expression *1990-91 expenditure breakdown: research support, $70,142; equipment, $4,000* **1990-91 EP Jul 90–Mar 91** *MT-10875*	$ 74,142/90-91
1283	**MOSS, THOMAS** ***Biochimie, Laval*** Ribosomal transcription in Xenopus laevis **1990-91 EP avr 90–mar 91** *MA-10436*	$ 91,250/88-89 95,000/89-90 95,000/90-91
1284	**MOUTON, CHRISTIAN** ***Médecine dentaire, Laval*** Immunobiology of Bacteroides gingivalis **1990-91 EP avr 90–mar 91** *MA-8761*	$ 304,030/84-89 76,102/89-90 72,712/90-91
1285	**MOUTQUIN, JEAN-MARIE** ***Obstétrique et gynécologie, Laval*** **FOREST, JEAN-CLAUDE** ***Biochimie, Laval*** Facteurs de régulation de l'homéostase vasculaire chez l'hypertendue enceinte **1990-91 EP avr 90–mar 91** *MA-8694*	$ 228,420/84-89 66,172/89-90 42,000/90-91
1286	**MROSOVSKY, NICHOLAS** ***Zoology, Toronto*** Physiology and properties of behavioural non-photic effects on rhythms **1990-91 EP Apr 90–Mar 91** *MA-10165*	$ 36,821/88-89 25,700/89-90 29,945/90-91
1287	**MUELLER, CHRISTOPHER R.** ***Biochemistry, Queen's*** The role of TGF-beta in liver regeneration *1990-91 expenditure breakdown: research support, $52,500; equipment, $16,000* **1990-91 EP Jul 90–Mar 91** *MT-10939*	$ 68,500/90-91
1288	**MUKHERJEE, BARID B.** ***Biology, McGill*** Biochemical characterization and functional analysis of a major phosphoprotein secreted by mammalian cells in culture **1990-91 EP Apr 90–Mar 91** *MA-10593*	$ 44,625/89-90 59,500/90-91
1289	**MULLEN, KATHY T.** ***Ophthalmology, McGill*** The chromatic coding of space in the human visual system **1990-91 EP Sep 90–Mar 91** *MT-10819*	$ 28,565/90-91
1290	**MULLER, WILLIAM J.** ***Pathology, McMaster*** Role of recessive oncogenes in mammary carcinogenesis **1990-91 EP Apr 90–Mar 91** *MT-10594*	$ 78,229/89-90 84,305/90-91
1291	**MULLIGAN, MARTIN E.** ***Biochemistry, Memorial University of Newfoundland*** DNA rearrangement and nitrogen-fixation gene expression in the cyanobacterium Anabaena **1990-91 EP Apr 90–Mar 91** *MA-10595*	$ 53,250/89-90 47,000/90-91
1292	**MUNOZ, DAVID G.** ***Pathology, Western Ontario*** Cerebral chromogranin A: normal function and involvement in Alzheimer's disease *1990-91 expenditure breakdown: research support, $46,444; equipment, $13,260* **1990-91 EP Jul 90–Mar 91** *MT-10850*	$ 59,704/90-91
1293	**MURGITA, ROBERT A.** ***Microbiology and Immunology, McGill*** Studies on the immunoregulatory properties of alpha-fetoprotein **1990-91 EP Apr 90–Mar 91** *MA-6470*	$ 802,913/78-89 105,295/89-90 98,395/90-91
1294	**MURIALDO, HELIOS** ***Medical Genetics, Toronto*** The morphogenesis of bacteriophage lambda **1990-91 EP Apr 90–Mar 91** *MT-7920*	$ 577,362/83-89 113,300/89-90 113,300/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1295	**MURPHY, BEVERLEY E.P.** *Medicine, McGill* Steroids in development and behaviour *MA-2170*	$ 1,180,377/66-89 107,161/89-90 55,180/90-91
1296	**MURPHY, BRUCE D.** *Obstetrics and Gynecology, Saskatchewan* Luteotropins and low density lipoproteins **1990-91 EP Apr 90–Jun 90** *MA-9245*	$ 149,984/85-89 37,281/89-90 8,772/90-91
1297	**MURPHY, BRUCE D.** *Obstetrics and Gynecology, Saskatchewan* Regulation of the corpus luteum *1990-91 expenditure breakdown: research support, $42,750; equipment, $78,000* **1990-91 EP Jul 90–Mar 91** *MT-11018*	$ 120,750/90-91
1298	**MURPHY, LEIGH C.** *Biochemistry and Molecular Biology, Manitoba* Epidermal growth factor gene expression in human breast cancer **1990-91 EP Apr 90–Mar 91** *MT-10345*	$ 52,300/88-89 47,000/89-90 56,975/90-91
1299	**MURPHY, LIAM J.** *Medicine, Manitoba* Growth hormone regulation of insulin-like growth factor-I expression **1990-91 EP Apr 90–Mar 91** *MA-10072*	$ 87,500/87-89 54,500/89-90 56,000/90-91
1300	**MURPHY, MARY G.** *Physiology and Biophysics, Dalhousie* **CROCKER, JOHN F.S.** *Pediatrics, Dalhousie* **MALATJALIAN, DIKRAN A.** *Pathology, Dalhousie* Chemical potentiation of virus-initiated disorders: mechanism(s) of initiation, enzymatic defects, and morphological correlates **1990-91 EP Apr 90–Mar 91** *MA-10073*	$ 78,225/87-89 59,524/89-90 47,555/90-91
1301	**MURPHY, MARY G.** *Physiology and Biophysics, Dalhousie* Mechanisms of membrane lipid modulation of neuroreceptor function in cultured neural cell lines and in primary cultures of neurons and astrocytes **1990-91 EP Apr 90–Mar 91** *MA-7737*	$ 290,003/82-89 47,200/89-90 47,200/90-91
1302	**MURPHY, PAUL R.** *Physiology and Biophysics, Dalhousie* Regulation of basic fibroblast growth factor expression and secretion *1990-91 expenditure breakdown: research support, $40,136; equipment, $47,070* **1990-91 EP Jul 90–Mar 91** *MT-10922*	$ 87,206/90-91
1303	**MURRAY, ROBERT K.** *Biochemistry, Toronto* Studies on two rat pentraxins *MA-3327*	$ 1,068,860/68-89 85,000/89-90 43,563/90-91
1304	**MURRAY, TIMOTHY M.** **RAO, LETICIA G.** *Medicine, Toronto* A study of human osteoblast function in vitro: application to osteoporosis **1990-91 EP Apr 90–Jun 90** *MA-10074*	$ 102,480/87-89 42,500/89-90 10,000/90-91
1305	**MURRAY, TIMOTHY M.** **RAO, LETICIA G.** *Medicine, Toronto* A study of human osteoblast function in vitro: application to osteoporosis *1990-91 expenditure breakdown: research support, $56,413; equipment, $10,000* **1990-91 EP Jul 90–Mar 91** *MT-10990*	$ 66,413/90-91
1306	**MUSHYNSKI, WALTER E.** *Biochemistry, McGill* Studies of mammalian neurofilaments **1990-91 EP Apr 90–Mar 91** *MT-5159*	$ 943,597/73-89 99,760/89-90 97,409/90-91
1307	**MUSTARD, J. FRASER** **KINLOUGH-RATHBONE, RAELENE L.** *Pathology, McMaster* In vivo and in vitro studies of the relationship among blood platelets, blood coagulation and the vessel wall **1990-91 EP Apr 90–Mar 91** *MT-1309*	$ 3,416,802/62-89 267,000/89-90 267,000/90-91
1308	**MUTCH, W. ALAN C.** *Anesthesia, Manitoba* Regional cerebral blood flow comparing vasopressors following subarachnoid hemorrhage in awake and anesthetized rabbits **1990-91 EP Apr 90–Mar 91** *MA-9868*	$ 55,448/87-89 27,305/89-90 29,667/90-91
1309	**NACCACHE, PAUL H.** *Médecine, Laval* Mechanisms of activation of the neutrophils by eicosanoids **1990-91 EP avr 90–mar 91** *MA-9779*	$ 88,215/87-89 56,918/89-90 59,040/90-91
1310	**NADEAU, ANDRE** **ROUSSEAU-MIGNERON, SUZANNE** *Médecine, Laval* Beneficial effects of physical training on diabetes mellitus: studies of some possible endocrine mechanisms **1990-91 EP avr 90–mar 91** *MA-6954*	$ 340,794/81-89 61,460/89-90 63,305/90-91
1311	**NADEAU, REGINALD A.** *Médecine, Montréal* Autonomic nervous system and cardiovascular function and disease **1990-91 EP avr 90–mar 91** *MT-1653*	$ 1,598,521/64-89 140,000/89-90 140,000/90-91
1312	**NADLER, STEVEN P.** *Medicine, Ottawa* Collecting duct salt transport **1990-91 EP Apr 90–Mar 91** *MA-9843*	$ 126,927/86-89 57,673/89-90 57,755/90-91

List No.	Grant/Award	Financial History
1313	**NAGY, JAMES I.** ***Physiology, Manitoba*** **MURPHY, LIAM J.** ***Medicine, Manitoba*** Biomedical neuroanatomy and molecular biology of gap junctions and gap junction proteins in the mammalian central nervous system *MA-10596*	$ 39,548/89-90 23,070/90-91
1314	**NAGY, JAMES I.** ***Physiology, Manitoba*** Neuroanatomy and biochemistry of the central and peripheral interactions of primary afferent systems **1990-91 EP Apr 90–Mar 91** *MA-8674*	$ 205,405/84-89 59,059/89-90 51,988/90-91
1315	**NAIR, N.P. VASAVAN** ***Psychiatry, McGill*** Melatonin and cortisol circadian rhythms and noradrenergic functions in normal aging and Alzheimer's disease **1990-91 EP Apr 90–Mar 91** *MA-10597*	$ 44,180/89-90 58,907/90-91
1316	**NALBANTOGLU, JOSEPHINE** ***Medicine, McGill*** The role of beta-amyloid precursor protein in Alzheimer's disease: development of cell culture systems and transgenic mice *1990-91 expenditure breakdown: research support, $48,422; equipment, $10,203* **1990-91 EP Apr 90–Mar 91** *MA-10407*	$ 60,000/88-89 41,075/89-90 58,625/90-91
1317	**NANCE, DWIGHT M.** ***Pathology, Manitoba*** Psychoneuroendocrine functions of the septal area **1990-91 EP Apr 90–Mar 91** *MT-6807*	$ 223,613/81-89 39,131/89-90 39,131/90-91
1318	**NANCE, DWIGHT M.** ***Pathology, Manitoba*** Autonomic control of the endocrine and immune systems *MA-10169*	$ 42,294/88-89 39,948/89-90 27,964/90-91
1319	**NANCI, ANTONIO** ***Médecine dentaire, Montréal*** Immunocytochemical studies on the enamel organ **1990-91 EP avr 90–mar 91** *MA-9780*	$ 98,355/87-89 58,053/89-90 58,616/90-91
1320	**NARAYANAN, NJANOOR** ***Physiology, Western Ontario*** Regulation of sarcoplasmic reticulum Ca2+ transport in heart muscle by endogenous protein inhibitor and inhibitor antagonist **1990-91 EP Apr 90–Mar 91** *MA-9553*	$ 223,015/85-89 69,000/89-90 69,000/90-91
1321	**NATHANIEL, EDWARD J.H.** ***Anatomy, Manitoba*** Can thyroxine administration ameliorate the ill effects of maternal ethanol ingestion on the postnatal development of the cerebellum in the rat? **1990-91 EP Apr 90–Mar 91** *MT-10598*	$ 43,650/89-90 38,000/90-91
1322	**NATTEL, STANLEY** ***Pharmacology and Therapeutics, McGill*** The physiologic and clinical relevance of basic models of antiarrhythmic drug action **1990-91 EP Apr 90–Mar 91** *MT-6957*	$ 274,663/81-89 48,968/89-90 57,859/90-91
1323	**NAUS, CHRISTIAN C.G.** ***Anatomy, Western Ontario*** Gap junctions in mature and developing central nervous system *1990-91 expenditure breakdown: research support, $43,826; equipment, $6,800* **1990-91 EP Jul 90–Mar 91** *MT-10855*	$ 50,626/90-91
1324	**NAZAR, ROSS N.** ***Molecular Biology and Genetics, Guelph*** Changes in the methylation of ribosomal and nucleolar RNA during oncogenesis **1990-91 EP Apr 90–Mar 91** *MT-6666*	$ 297,914/79-89 40,960/89-90 41,272/90-91
1325	**NELSON, JAMES F.** ***Obstetrics and Gynecology, McGill*** Aging of the hypothalamo-pituitary-ovarian axis: hormonal influences and cellular mechanisms **1990-91 EP Apr 90–Jun 90** *MA-9246*	$ 227,322/85-89 63,876/89-90 16,124/90-91
1326	**NESHEIM, MICHAEL E.** ***Medicine, Queen's*** Functional properties of prothrombinase **1990-91 EP Apr 90–Mar 91** *MT-9781*	$ 154,858/87-89 91,402/89-90 90,572/90-91
1327	**NEUFELD, R.W. JAMES** ***Psychology, Western Ontario*** Parameters of cognitive abnormalities in schizophrenia **1990-91 EP Apr 90–Mar 91** *MT-5028*	$ 492,170/73-89 52,530/89-90 53,584/90-91
1328	**NEUMAN, RICHARD S.** ***Pharmacology, Memorial University of Newfoundland*** Serotonergic modulation of cortical excitability **1990-91 EP Apr 90–Mar 91** *MT-9861*	$ 37,686/87-89 16,885/89-90 51,768/90-91
1329	**NEUMANN, A. WILHELM** ***Mechanical Engineering, Toronto*** **ZINGG, WALTER** ***Biomedical Engineering, Toronto*** Thermodynamic aspects of protein and cell interactions with synthetic materials **1990-91 EP Apr 90–Mar 91** *MT-5462*	$ 865,504/75-89 112,260/89-90 112,260/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1330	**NEWKIRK, MARIANNA M.** ***Medicine, McGill*** Structure of human antiviral antibodies and autoantibodies **1990-91 EP Apr 90–Mar 91** *MT-10599*	$ 68,250/89-90 71,000/90-91
1331	**NISBET-BROWN, ERIC R.** ***Immunology, Toronto*** Immunopathogenesis of viral infections *MA-10408*	$ 50,000/88-89 50,000/89-90 40,625/90-91
1332	**NISHIOKA, YUTAKA** ***Biology, McGill*** Genetics of reproductive failure in the mouse *1990-91 expenditure breakdown: research support, $75,009; equipment, $8,850* **1990-91 EP Apr 90–Mar 91** *MT-6809*	$ 401,090/81-89 68,120/89-90 83,859/90-91
1333	**NIZNIK, HYMAN B.** ***Psychiatry, Toronto*** Dopamine D1 receptors: structure and function *MA-10194*	$ 59,000/88-89 44,000/89-90 22,550/90-91
1334	**NOBREGA, JOSE N.** ***Psychiatry, Toronto*** Autoradiographic study of alcohol effects on the GABA receptor complex in brain **1990-91 EP Jul 90–Mar 91** *MA-11004*	$ 33,347/90-91
1335	**NOSEWORTHY, JOHN H.** ***Clinical Neurological Sciences, Western Ontario*** **GENT, MICHAEL** ***Clinical Epidemiology and Biostatistics, McMaster*** **SELAND, THOMAS P.** ***Clinical Neurosciences, Calgary*** **SHUMAK, KENNETH H.** ***Medicine, Toronto*** **EBERS, GEORGE C.** ***Clinical Neurological Sciences, Western Ontario*** Canadian cooperative study of cyclophosphamide and plasma exchange in progressive multiple sclerosis **1990-91 EP Apr 90–Jun 90** *MA-9116*	$ 989,841/85-89 111,864/89-90 29,048/90-91
1336	**O'BRIEN, PETER J.** ***Pharmacy, Toronto*** The molecular basis of drug toxicity **1990-91 EP Apr 90–Mar 91** *MA-10426*	$ 92,235/89-90 72,639/90-91
1337	**O'BYRNE, PAUL M.** ***Medicine, McMaster*** Role of inflammatory mediators in asthma **1990-91 EP Apr 90–Mar 91** *MA-9362*	$ 140,798/85-89 40,103/89-90 40,545/90-91
1338	**O'DRISCOLL, SHAWN W.** ***Surgery, Toronto*** Regulation of periosteal neochondrogenesis for cartilage regeneration *1990-91 expenditure breakdown: research support, $34,238; equipment, $21,250* **1990-91 EP Jul 90–Mar 91** *MA-10879*	$ 55,488/90-91
1339	**O'KUSKY, JOHN R.** **NORMAN, MARGARET G.** ***Pathology, British Columbia*** Developmental abnormalities in sudden infant death syndrome: morphometric analysis of axon remodelling and synapse elimination in the central nervous system **1990-91 EP Apr 90–Mar 91** *MT-10600*	$ 31,927/89-90 34,702/90-91
1340	**OGILVIE, RICHARD I.** ***Medicine, Toronto*** Vascular capacitance in heart failure *1990-91 expenditure breakdown: research support, $57,135; equipment, $3,000* **1990-91 EP Apr 90–Mar 91** *MA-4971*	$ 508,086/73-89 50,429/89-90 60,135/90-91
1341	**OKEY, ALLAN B.** ***Pharmacology, Toronto*** Structure and function of the Ah receptor **1990-91 EP Apr 90–Mar 91** *MT-7324*	$ 508,073/80-89 84,247/89-90 90,650/90-91
1342	**OLIVE, PEGGY L.** ***Pathology, British Columbia*** DNA damage using spheroids **1990-91 EP Apr 90–Mar 91** *MA-8819*	$ 227,657/84-89 48,906/89-90 65,208/90-91
1343	**OLIVIERI, NANCY F.** **KOREN, GIDEON** ***Pediatrics, Toronto*** A pilot study of a new oral iron chelator for transfusional iron overload in non-compliant, older thalassemia patients **1990-91 EP Apr 90–Mar 91** *MA-10601*	$ 59,617/89-90 79,489/90-91
1344	**OLLEY, PETER M.** ***Pediatrics, Alberta*** Prostaglandin E2 receptors in heart **1990-91 EP Apr 90–Mar 91** *MA-10602*	$ 54,000/89-90 72,000/90-91
1345	**OLNEY, SANDRA J.** **WYSS, URS P.** ***Rehabilitation Therapy, Queen's*** Studies in pathological locomotion *MA-8178*	$ 89,411/83-89 12,969/89-90 9,110/90-91
1346	**ONG, BILL Y.** ***Anesthesia, Manitoba*** **BOSE, RATNA** ***Pharmacology and Therapeutics, Manitoba*** **BOSE, DEEPAK** ***Pharmacology and Therapeutics, Manitoba*** Mechanisms of impaired cerebral blood flow regulation after asphyxia *MA-8719*	$ 203,535/84-89 45,759/89-90 23,452/90-91

List No.	Grant/Award	Financial History
1347	**ONG, HUY** ***Pharmacie, Montréal*** **DE LEAN, ANDRE** ***Pharmacologie, Montréal*** Natriuretic peptide hormones in the adrenal medulla: regulation mechanisms of their biosynthesis and their secretion in in vitro and in vivo studies **1990-91 EP jlt 90–sep 90** *MA-11088*	$ 12,795/90-91
1348	**OPAS, MICHAL J.** ***Anatomy, Toronto*** Regulation of expression of differentiated phenotype in retinal tissues in vitro **1990-91 EP Apr 90–Mar 91** *MT-9713*	$ 118,724/86-89 54,491/89-90 55,569/90-91
1349	**OPPENHEIMER, LUIS** ***Surgery, Manitoba*** On-line colorimetric measurement of membrane properties and protein transport **1990-91 EP Apr 90–Mar 91** *MA-7107*	$ 329,444/79-89 56,065/89-90 50,265/90-91
1350	**ORR, F. WILLIAM** **SINGH, GURMIT** ***Pathology, McMaster*** Studies on the mechanisms of cancer metastasis to bone **1990-91 EP Apr 90–Mar 91** *MT-10409*	$ 58,867/88-89 57,885/89-90 66,853/90-91
1351	**ORR, F. WILLIAM** **PODOR, THOMAS J.** **BUCHANAN, MICHAEL R.** ***Pathology, McMaster*** Regulation of cancer metastasis by endothelial cells **1990-91 EP Apr 90–Mar 91** *MA-9991*	$ 105,000/87-89 67,320/89-90 69,760/90-91
1352	**ORR, JAMES C.** ***Biochemistry, Memorial University of Newfoundland*** Chemical mechanisms in steroid metabolism *MA-6124*	$ 854,917/77-89 80,000/89-90 56,000/90-91
1353	**OSMOND, DENNIS G.** ***Anatomy, McGill*** Architectural and molecular basis of lymphocyte differentiation in bone marrow **1990-91 EP Apr 90–Mar 91** *MT-4253*	$ 1,117,664/71-89 131,952/89-90 136,972/90-91
1354	**OTTAWAY, CLIFFORD A.** ***Medicine, Toronto*** Studies of neuroendocrine modulation of immune responses **1990-91 EP Apr 90–Mar 91** *MA-8139*	$ 257,922/83-89 58,278/89-90 55,845/90-91
1355	**OTTENSMEYER, F. PETER** ***Medical Biophysics, Toronto*** Macromolecular and cellular electron microscopy **1990-91 EP Apr 90–Mar 91** *MT-3763*	$ 1,027,174/69-89 114,668/89-90 114,668/90-91

N° de liste	Subvention/Bourse	Résumé financier
1356	**OTTENSMEYER, F. PETER** ***Medical Biophysics, Toronto*** **SIMON, GERARD T.** ***Pathology, McMaster*** Quantitative electron energy loss microanalysis **1990-91 EP Apr 90–Mar 91** *MA-9992*	$ 56,000/87-89 40,082/89-90 44,944/90-91
1357	**OULTON, MARGARET R.** ***Obstetrics and Gynecology, Dalhousie*** Surfactant pathways in fetal and newborn rabbits **1990-91 EP Apr 90–Mar 91** *MA-5908*	$ 528,906/76-89 67,967/89-90 59,048/90-91
1358	**OWENS, TREVOR** ***Neurology and Neurosurgery, McGill*** The regulation of CD4+ helper T cell activation *1990-91 expenditure breakdown: research support, $72,405; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MT-10173*	$ 78,000/88-89 68,000/89-90 82,405/90-91
1359	**PACE-ASCIAK, CECIL R.** ***Pediatrics, Toronto*** Enzymes in the hepoxilin and leukotriene pathways of arachidonic acid metabolism **1990-91 EP Apr 90–Mar 91** *MA-7935*	$ 223,278/83-89 47,010/89-90 49,080/90-91
1360	**PACE-ASCIAK, CECIL R.** ***Pediatrics, Toronto*** The effect of stress on the formation and metabolism of prostaglandins, lipoxygenase products and epoxygenase metabolites of arachidonic acid in vivo **1990-91 EP Apr 90–Mar 91** *MT-4181*	$ 1,175,166/70-89 107,000/89-90 107,000/90-91
1361	**PACKHAM, MARIAN A.** ***Biochemistry, Toronto*** The interaction of platelets with agents causing aggregation, adherence and the release of platelet constituents in vitro and in vivo, including studies of platelet survival and thrombosis **1990-91 EP Apr 90–Mar 91** *MT-2629*	$ 1,224,379/67-89 122,708/89-90 122,708/90-91
1362	**PAETKAU, VERNER H.** ***Biochemistry, Alberta*** Regulation of lymphokine genes **1990-91 EP Apr 90–Mar 91** *MT-3764*	$ 1,075,872/69-89 93,849/89-90 101,218/90-91
1363	**PAIEMENT, JACQUES M.** ***Anatomie, Montréal*** Cytology of membrane assembly *1990-91 ventilation des dépenses: aide à la recherche, $69,043; appareils, $14,907* **1990-91 EP avr 90–mar 91** *MT-7325*	$ 421,546/80-89 64,848/89-90 83,950/90-91
1364	**PAIGE, CHRISTOPHER J.** ***Medical Biophysics, Toronto*** B cell development **1990-91 EP Apr 90–Mar 91** *MA-9862*	$ 164,900/87-89 103,810/89-90 116,659/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1365	**PAINTER, ROBERT H.** ***Biochemistry, Toronto*** Investigation of the structural basis of the function of immunoglobulins and related defence systems **1990-91 EP Apr 90–Mar 91** *MT-1361*	$ 928,362/63-89 78,150/89-90 78,700/90-91	1374	**PANG, STEPHEN C.-N.** ***Anatomy, Queen's*** Vascular smooth muscle hyperplasia in experimental hypertension *1990-91 expenditure breakdown: research support, $50,968; equipment, $5,000* **1990-91 EP Apr 90–Mar 91** *MT-9582*	$ 150,312/85-89 47,488/89-90 55,968/90-91
1366	**PALCIC, BRANKO** ***Pathology, British Columbia*** Studies at low doses of ionizing radiation and other physical and chemical agents **1990-91 EP Apr 90–Mar 91** *MA-7743*	$ 451,226/82-89 70,310/89-90 75,321/90-91	1375	**PAPPIUS, HANNA M.** ***Neurology and Neurosurgery, McGill*** Functional disturbances in injured brain: continuing search for underlying mechanisms **1990-91 EP Apr 90–Mar 91** *MT-3021*	$ 1,016,762/68-89 92,815/89-90 92,815/90-91
1367	**PALMER, FREDERICK B.ST.C.** ***Biochemistry, Dalhousie*** Purification and properties of two polyphosphoinositide phosphatases **1990-91 EP Apr 90–Mar 91** *MT-2949*	$ 621,407/70-89 52,600/89-90 52,600/90-91	1376	**PAQUET, MICHEL R.** ***Clinical Biochemistry, Toronto*** Insulin-dependent recruitment of glucose transporter **1990-91 EP Apr 90–Mar 91** *MT-10619*	$ 46,920/89-90 51,659/90-91
1368	**PANAGIA, VINCENZO** ***Anatomy, Manitoba*** Phospholipid methylation in cardiac failure **1990-91 EP Apr 90–Mar 91** *MT-7855*	$ 208,915/82-89 33,887/89-90 39,729/90-91	1377	**PARANCHYCH, WILLIAM** ***Microbiology, Alberta*** Transfer of conjugative plasmids; genetic and functional analysis of Pseudomonas aeruginosa polar pili **1990-91 EP Apr 90–Mar 91** *MT-3022*	$ 1,668,601/68-89 150,872/89-90 150,872/90-91
1369	**PANDE, SHRI V.** ***Institut de recherches cliniques de Montréal*** Metabolism and functions of carnitine **1990-91 EP avr 90–mar 91** *MT-4264*	$ 1,237,613/71-89 136,578/89-90 137,904/90-91	1378	**PARE, PETER D.** ***Medicine, British Columbia*** Airway mechanics and bronchial hyperreactivity **1990-91 EP Apr 90–Mar 91** *MA-7253*	$ 353,225/80-89 64,788/89-90 70,799/90-91
1370	**PANG, CATHERINE C.Y.** ***Pharmacology and Therapeutics, British Columbia*** Investigation into mechanisms responsible for pressor response to beta-blockers **1990-91 EP Apr 90–Mar 91** *MA-9993*	$ 81,193/87-89 49,088/89-90 47,471/90-91	1379	**PARENT, ANDRE** ***Anatomie, Laval*** Etude neuroanatomique et immunohistochimique de l'organisation du prosencéphale **1990-91 EP avr 90–mar 91** *MT-5781*	$ 679,510/76-89 110,043/89-90 110,043/90-91
1371	**PANG, CHO Y.** ***Surgery, Toronto*** Regulation of cutaneous circulation in skin flaps **1990-91 EP Apr 90–Mar 91** *MT-8048*	$ 298,631/83-89 63,036/89-90 68,559/90-91	1380	**PARFREY, NOLLAIG A.** ***Pathology, Alberta*** T cell education and effector mechanisms in autoimmune and alloimmune disease **1990-91 EP Apr 90–Mar 91** *MT-10620*	$ 42,533/89-90 56,710/90-91
1372	**PANG, K. SANDY** ***Pharmacy, Toronto*** Interrelationship between organ and in vivo clearances of drugs and metabolites *1990-91 expenditure breakdown: research support, $103,183; equipment, $984* **1990-91 EP Apr 90–Mar 91** *MT-9104*	$ 356,663/85-89 105,069/89-90 104,167/90-91	1381	**PARHAD, IRMA M.** ***Pathology, Calgary*** Neurofilament gene regulation in vivo **1990-91 EP Apr 90–Mar 91** *MA-9975*	$ 79,577/87-89 61,333/89-90 63,087/90-91
1373	**PANG, K. SANDY** ***Pharmacy, Toronto*** **GORESKY, CARL A.** ***Medicine, McGill*** Organ processing of drugs: precursor-product relationships **1990-91 EP Apr 90–Mar 91** *MT-9765*	$ 162,826/86-89 64,175/89-90 70,908/90-91	1382	**PARKER, PHILIP A.** ***Electrical Engineering, New Brunswick*** Neuroelectric signal detection/estimation **1990-91 EP Apr 90–Mar 91** *MT-10166*	$ 33,354/88-89 31,050/89-90 31,050/90-91

List No.	Grant/Award	Financial History
1383	**PARRY, DAVID J.** ***Physiology, Ottawa*** Factors affecting muscle fibre type differentiation: a correlative study of physiological, biochemical and histochemical properties of different fibre types in mouse and rat **1990-91 EP Apr 90–Mar 91** *MA-8706*	$ 227,538/84-89 64,175/89-90 64,175/90-91
1384	**PASUTTO, FRANCO M.** ***Pharmacy and Pharmaceutical Sciences, Alberta*** **BURKA, JOHN F.** ***Atlantic Veterinary College, Prince Edward Island*** Antagonists of the arachidonic acid cascade: synthesis and pharmacology **1990-91 EP Apr 90–Mar 91** *MT-10201*	$ 45,500/88-89 45,500/89-90 47,565/90-91
1385	**PATEL, YOGESH C.** ***Medicine, McGill*** Studies of gastric somatostatin function **1990-91 EP Apr 90–Mar 91** *MT-10411*	$ 40,000/88-89 40,000/89-90 40,000/90-91
1386	**PATEL, YOGESH C.** ***Medicine, McGill*** Studies of somatostatin biosynthesis, processing and gene regulation *1990-91 expenditure breakdown: research support, $129,613; equipment, $22,002* **1990-91 EP Apr 90–Mar 91** *MT-6196*	$ 790,582/77-89 102,560/89-90 151,615/90-91
1387	**PATER, ALAN** **PATER, MARY M.** ***Microbiology, Memorial University of Newfoundland*** Glucocorticoid-dependent oncogenesis of primary cells by human papillomaviruses **1990-91 EP Apr 90–Mar 91** *MA-9782*	$ 85,439/87-89 56,772/89-90 59,376/90-91
1388	**PATER, MARY M.** **PATER, ALAN** ***Microbiology, Memorial University of Newfoundland*** Mechanism of tissue tropism by human papovaviruses **1990-91 EP Apr 90–Mar 91** *MT-10146*	$ 54,000/88-89 54,000/89-90 67,650/90-91
1389	**PATERSON, ALAN R.P.** ***Biochemistry, Alberta*** **CASS, CAROL E.** ***Biochemistry, Alberta*** **YOUNG, JAMES D.** ***Physiology, Alberta*** Nucleoside transport systems of mammalian cells: kinetic and molecular studies **1990-91 EP Apr 90–Mar 91** *MT-0814*	$ 1,198,266/59-89 94,302/89-90 96,580/90-91
1390	**PATERSON, JEAN A.** ***Anatomy, Manitoba*** Neuronal function and neovascularization in the developing auditory system of rats **1990-91 EP Apr 90–Mar 91** *MA-9977*	$ 72,941/87-89 46,583/89-90 47,947/90-91
1391	**PATERSON, MALCOLM C.** ***Medicine, Alberta*** Processing of ultraviolet-induced damage in human cells **1990-91 EP Apr 90–Mar 91** *MA-10079*	$ 175,000/87-89 113,200/89-90 117,600/90-91
1392	**PATERSON, NIGEL A.M.** **MCCORMACK, DAVID G.** ***Medicine, Western Ontario*** Mediators of pulmonary injury *MA-7327*	$ 422,198/80-89 55,221/89-90 44,867/90-91
1393	**PATERSON, WILLIAM G.** ***Medicine, Queen's*** Further studies on distension-induced esophageal peristalsis **1990-91 EP Apr 90–Mar 91** *MA-9978*	$ 68,649/87-89 37,896/89-90 38,357/90-91
1394	**PATO, MARY D.** ***Biochemistry, Saskatchewan*** Study of the regulation and function of the smooth muscle phosphatases **1990-91 EP Apr 90–Mar 91** *MT-9473*	$ 132,543/86-89 46,858/89-90 47,307/90-91
1395	**PATTERSON, G. ALEXANDER** ***Surgery, Toronto*** Lung allograft preservation **1990-91 EP Apr 90–Mar 91** *MT-10142*	$ 56,275/88-89 56,275/89-90 61,492/90-91
1396	**PAULIN-LEVASSEUR, MICHELINE** ***Biology, Ottawa*** Function and expression of nuclear lamins in mammalian somatic cells **1990-91 EP Apr 90–Mar 91** *MT-10621*	$ 67,178/89-90 49,570/90-91
1397	**PAWSON, ANTHONY J.** ***Medical Genetics, Toronto*** Structure and function of oncogene-encoded proteins **1990-91 EP Apr 90–Mar 91** *MT-6849*	$ 585,800/81-89 140,823/89-90 135,023/90-91
1398	**PAYET, MARCEL DANIEL** ***Physiologie et biophysique, Sherbrooke*** **DUPUIS, GILLES** ***Biochimie, Sherbrooke*** Mécanisme de passage des ions à travers la membrane plasmique: les canaux ioniques *1990-91 ventilation des dépenses: aide à la recherche, $67,607; appareils, $14,500* **1990-91 EP avr 90–mar 91** *MT6813,10218*	$ 233,034/81-89 59,018/89-90 82,107/90-91
1399	**PEARLMAN, RONALD E.** ***Biology, York*** Developmental genome reorganization in a unicellular eukaryote **1990-91 EP Apr 90–Mar 91** *MT-9686*	$ 177,086/86-89 61,244/89-90 60,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1400	**PEARSON, KEIR G.** *Physiology, Alberta* Morphological and electrophysiological studies on identified neurons **1990-91 EP Apr 90–Mar 91** *MT-6362*	$ 443,965/78-89 57,836/89-90 48,496/90-91
1401	**PELECH, STEVEN D.** *Medicine, British Columbia* Purification and characterization of cell cycle-regulated protein kinases **1990-91 EP Apr 90–Mar 91** *MA-10005*	$ 90,500/87-89 56,730/89-90 57,640/90-91
1402	**PELLETIER, JEAN-PIERRE** *Médecine, Montréal* Modèle expérimental d'arthrose: étude de l'effet thérapeutique des corticostéroides **1990-91 EP avr 90–mar 91** *MT-8114*	$ 234,195/83-89 44,000/89-90 51,401/90-91
1403	**PENCHARZ, PAUL B.** *Pediatrics, Toronto* **BALL, RONALD O.** *Animal and Poultry Science, Guelph* The use of indicator amino acid oxidation to determine amino acid requirements **1990-91 EP Apr 90–Mar 91** *MT-10321*	$ 72,890/88-89 72,890/89-90 77,469/90-91
1404	**PENCHARZ, PAUL B.** *Pediatrics, Toronto* Studies in the protein and energy metabolism of human neonates **1990-91 EP Apr 90–Mar 91** *MT-5466*	$ 646,569/75-89 102,873/89-90 111,743/90-91
1405	**PENNEFATHER, PETER S.** *Pharmacy, Toronto* Electrophysiological assays for delineating basic mechanisms of autonomic regulation **1990-91 EP Apr 90–Dec 90** *MA-9604*	$ 128,183/85-89 43,111/89-90 32,333/90-91
1406	**PENNEFATHER, PETER S.** *Pharmacy, Toronto* Regulation of ion currents in cardiac myocytes **1990-91 EP Apr 90–Dec 90** *MA-9832*	$ 83,498/87-89 45,214/89-90 27,200/90-91
1407	**PEPPLER, MARK S.** *Medical Microbiology and Infectious Diseases, Alberta* Receptor-binding domains of pertussis toxin and the molecular basis of pertussis invasiveness *1990-91 expenditure breakdown: research support, $54,500; equipment, $11,500* **1990-91 EP Apr 90–Mar 91** *MT-10415*	$ 55,031/88-89 50,000/89-90 66,000/90-91
1408	**PERDUE, MARY H.** *Pathology, McMaster* Effect of immune factors on intestinal epithelium **1990-91 EP Apr 90–Mar 91** *MA-9316*	$ 170,674/85-89 48,586/89-90 49,821/90-91

N° de liste	Subvention/Bourse	Résumé financier
1409	**PERRY, THOMAS L.** *Pharmacology and Therapeutics, British Columbia* Biochemical basis of mental dysfunction **1990-91 EP Apr 90–Mar 91** *MT-1435*	$ 1,252,482/63-89 93,686/89-90 90,215/90-91
1410	**PETERSEN, NILS O.** *Biochemistry, Western Ontario* Cell surface dynamics of monoclonal antibodies directed at receptors which induce superoxide release in human promyelocytic leukemia cells *MA-10322*	$ 42,000/88-89 42,000/89-90 18,375/90-91
1411	**PETERSON, LINDA N.** *Physiology, Ottawa* Urine concentrating mechanisms: the thick ascending limb **1990-91 EP Apr 90–Mar 91** *MA-7745*	$ 325,500/82-89 77,775/89-90 76,985/90-91
1412	**PETERSON, THERESA C.** *Medicine, Dalhousie* Cytochrome P-450 enzymes in liver disease *1990-91 expenditure breakdown: research support, $50,302; equipment, $14,900* **1990-91 EP Apr 90–Mar 91** *MT-10202*	$ 62,000/88-89 50,000/89-90 65,202/90-91
1413	**PETKOVICH, P. MARTIN** *Pathology, Queen's* Role of retinoic acid receptors in chick limb development *1990-91 expenditure breakdown: research support, $37,298; equipment, $40,000* **1990-91 EP Jul 90–Mar 91** *MA-11031*	$ 77,298/90-91
1414	**PETTY, ROSS E.** *Pediatrics, British Columbia* Immunopathogenesis of arthritis and uveitis induced by mycobacterial antigens *MA-10416*	$ 55,000/88-89 51,000/89-90 26,138/90-91
1415	**PHILIPPE, ERIC** *Anatomie, Laval* Influence épigénétique des tissus-cibles sur l'expression phénotypique de neurones impliqués dans l'arc réflexe *MA-10380*	$ 79,095/88-89 46,914/89-90 32,840/90-91
1416	**PHILLIPS, M. JAMES** *Pathology, Toronto* Human and experimental liver disease **1990-91 EP Apr 90–Mar 91** *MT-0785*	$ 1,550,866/59-89 148,069/89-90 148,069/90-91
1417	**PHILLIPS, NIGEL C.** **TSOUKAS, CHRISTOS M.** *Medicine, McGill* Immunoliposome targeting to CD4-positive cells **1990-91 EP Apr 90–Mar 91** *MA-10622*	$ 48,185/89-90 61,500/90-91

List No.	Grant/Award	Financial History
1418	**PHILLIPS, ROBERT A.** *Medical Biophysics, Toronto* Stem cells and early progenitors of the lymphoid system **1990-91 EP Apr 90–Mar 91** *MT-3766*	$ 1,255,166/69-89 123,412/89-90 124,610/90-91
1419	**PHILLIPS, THOMAS W.** *Surgery, Western Ontario* Torsional loosening of cementless hip replacements **1990-91 EP Apr 90–Mar 91** *MT-10623*	$ 36,750/89-90 49,000/90-91
1420	**PHILLIPS, THOMAS W.** *Surgery, Western Ontario* Porous ingrowth for implant fixation: a comparative biomechanical study **1990-91 EP Apr 90–Mar 91** *MT-10375*	$ 80,445/88-89 50,445/89-90 57,528/90-91
1421	**PHILLIPSON, ELIOT A.** *Medicine, Toronto* The regulation of ventilation in health and disease **1990-91 EP Apr 90–Mar 91** *MT-4606*	$ 1,185,312/71-89 127,991/89-90 127,991/90-91
1422	**PHILP, RICHARD B.** **MCIVER, DONALD J.L.** *Pharmacology and Toxicology, Western Ontario* Studies of molecular and cellular effects of anesthetics *MA-10347*	$ 41,149/88-89 36,149/89-90 25,304/90-91
1423	**PICARD, MICHEL** *Orthophonie et audiologie, Montréal* **ILECKI, HENRY J.** *Otolaryngology, McGill* **BAXTER, JAMES D.** *Otolaryngology, McGill* Essai clinique d'un logiciel d'audiométrie informatisée **1990-91 EP jlt 90–mar 91** *MA-10913*	$ 33,251/90-91
1424	**PICTON, TERENCE W.** *Medicine, Ottawa* Human evoked potentials *1990-91 expenditure breakdown: research support, $63,836; equipment, $7,592* **1990-91 EP Apr 90–Mar 91** *MA-5465*	$ 538,158/75-89 62,511/89-90 71,428/90-91
1425	**PIERCE, GRANT N.** *Physiology, Manitoba* Biochemical and contractile adaptations of muscle to physical exercise **1990-91 EP Apr 90–Mar 91** *MA-9833*	$ 110,121/86-89 51,691/89-90 44,928/90-91
1426	**PIHL, ROBERT O.** *Psychology, McGill* Studies of individuals at high risk for alcoholism **1990-91 EP Apr 90–Mar 91** *MA-9980*	$ 81,250/87-89 51,945/89-90 52,673/90-91
1427	**PILARSKI, LINDA M.** *Immunology, Alberta* Adhesion molecules on human thymocytes **1990-91 EP Jul 90–Mar 91** *MT-10832*	$ 50,438/90-91
1428	**PILARSKI, LINDA M.** *Immunology, Alberta* T lymphocyte differentiation **1990-91 EP Apr 90–Mar 91** *MA-8627*	$ 396,700/84-89 93,744/89-90 96,325/90-91
1429	**PINSKY, CARL** *Pharmacology and Therapeutics, Manitoba* **SUTHERLAND, GARNETTE R.** *Surgery, Manitoba* **PEELING, W. JAMES** *Chemistry, Winnipeg* **DEL CAMPO, J.C. MARTIN** *Medicine, Manitoba* Opioid receptors, anticonvulsant drug mechanisms and cerebral lipid peroxidation **1990-91 EP Apr 90–Mar 91** *MT-7223*	$ 631,540/80-89 80,000/89-90 80,000/90-91
1430	**PITTMAN, QUENTIN J.** *Medical Physiology, Calgary* Neurophysiology and pharmacology of peptides in brain **1990-91 EP Apr 90–Mar 91** *MT-7363*	$ 364,811/80-89 88,635/89-90 88,635/90-91
1431	**PLAA, GABRIEL L.** **VEZINA, MANON** *Pharmacologie, Montréal* Toxicological studies on chemically induced intrahepatic cholestasis **1990-91 EP avr 90–mar 91** *MT-6157*	$ 626,482/77-89 68,507/89-90 68,507/90-91
1432	**PLEWES, DONALD B.** *Medical Biophysics, Toronto* **HENKELMAN, R. MARK** *Medical Biophysics, Toronto* **KUCHARCZYK, WALTER** *Radiology, Toronto* **BRONSKILL, MICHAEL J.** *Medical Biophysics, Toronto* Reduced scan time T2 weighted spin-echo magnetic resonance imaging *1990-91 expenditure breakdown: research support, $36,259; equipment, $11,366* **1990-91 EP Jul 90–Mar 91** *MA-10834*	$ 47,625/90-91
1433	**PODESTA, RONALD B.** *Zoology, Western Ontario* Schistosomiasis vaccine trials **1990-91 EP Apr 90–Sep 90** *MA-10203*	$ 60,189/88-89 51,000/89-90 25,500/90-91
1434	**PODGORSAK, ERVIN B.** **SOUHAMI, LUIS** *Radiation Oncology, McGill* Physics of radiosurgery *1990-91 expenditure breakdown: research support, $34,943; equipment, $30,000* **1990-91 EP Jul 90–Mar 91** *MT-10830*	$ 64,943/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1435	**POIRIER, GUY G.** ***Biochimie, Laval*** Propriétés de la poly(ADP-ribose) polymérase: rôle dans la réparation de l'ADN **1990-91 EP avr 90–mar 91** *MT-6128*	$ 374,085/77-89 54,000/89-90 54,000/90-91	1444	**POOLE, R. KEITH** ***Microbiology and Immunology, Queen's*** The role of iron transport in the pathogenesis of Pseudomonas aeruginosa **1990-91 EP Apr 90–Mar 91** *MA-10624*	$ 66,390/89-90 59,120/90-91
1436	**POITRAS, PIERRE** ***Médecine, Montréal*** Motilin and gastrointestinal motility *1990-91 ventilation des dépenses: aide à la recherche, $81,185; appareils, $46,115* **1990-91 EP avr 90–mar 91** *MT-8732*	$ 190,981/84-89 48,985/89-90 127,300/90-91	1445	**POSNER, BARRY I.** ***Medicine, McGill*** Insulin and insulin-like growth factors in growth, development and disease *1990-91 expenditure breakdown: research support, $181,646; equipment, $2,447* **1990-91 EP Apr 90–Mar 91** *MT-4182*	$ 1,347,928/70-89 168,096/89-90 184,093/90-91
1437	**POLIMENI, PHILIP I.** ***Pharmacology and Therapeutics, Manitoba*** Augmentation of cardiac output by linear macropolymers of microscopic lengths **1990-91 EP Apr 90–Jun 90** *MA-10183*	$ 48,752/88-89 44,362/89-90 11,090/90-91	1446	**POST, MARTIN** ***Pediatrics, Toronto*** Directive or permissive induction of lung maturation **1990-91 EP Jul 90–Mar 91** *MT-10907*	$ 64,820/90-91
1438	**POLOSA, CANIO** ***Physiology, McGill*** Studies of sympathetic preganglionic neuron physiology **1990-91 EP Apr 90–Mar 91** *MT-2475*	$ 795,834/67-89 98,075/89-90 98,075/90-91	1447	**POTIER, MICHEL L.** ***Pédiatrie, Montréal*** Inactivation et fragmentation des protéines par irradiation **1990-91 EP avr 90–mar 91** *MT-10625*	$ 46,500/89-90 62,000/90-91
1439	**POLYCHRONAKOS, CONSTANTIN** ***Pediatrics, McGill*** Interactions between mannose-6-phosphate and insulin-like growth factor II on their common receptor **1990-91 EP Jul 90–Mar 91** *MA-10995*	$ 33,750/90-91	1448	**POTIER, MICHEL L.** ***Pédiatrie, Montréal*** Relations structure-fonction dans les protéines activatrices lysosomiales **1990-91 EP jlt 90–mar 91** *MT-10956*	$ 43,788/90-91
1440	**POMERANTZ, DAVID K.** ***Physiology, Western Ontario*** Control of testicular function **1990-91 EP Apr 90–Mar 91** *MA-10433*	$ 67,959/89-90 85,279/90-91	1449	**POUBELLE, PATRICE E.** ***Médecine, Laval*** Bioactive lipids in bone resorption and their regulatory functions on osteoclasts and (or) osteoblasts **1990-91 EP avr 90–mar 91** *MT-10626*	$ 39,000/89-90 52,000/90-91
1441	**PONKA, PREMYSL** **SCHULMAN, HERBERT M.** ***Lady Davis Institute for Medical Research, Sir Mortimer B. Davis-Jewish General Hospital*** Chelation, mobilization and metabolism of storage iron *1990-91 expenditure breakdown: research support, $57,040; equipment, $9,500* **1990-91 EP Apr 90–Mar 91** *MA-7331*	$ 410,764/80-89 55,682/89-90 66,540/90-91	1450	**POUSSIER, PHILIPPE G.A.** ***Medicine, McGill*** The immunology of type I diabetes in the BB rat *1990-91 expenditure breakdown: research support, $65,462; equipment, $6,615* **1990-91 EP Apr 90–Mar 91** *MT-8569*	$ 227,028/84-89 51,000/89-90 72,077/90-91
1442	**POOLE, A. ROBIN** ***Surgery, McGill*** Calcification of cartilage matrix **1990-91 EP Apr 90–Mar 91** *MA-9276*	$ 181,863/85-89 60,477/89-90 61,068/90-91	1451	**POWELL, WILLIAM S.** ***Medicine, McGill*** Biosynthesis of eicosanoids and related substances in atherosclerosis and inflammation **1990-91 EP Apr 90–Mar 91** *MT-6254*	$ 470,139/77-89 71,441/89-90 78,950/90-91
1443	**POOLE, A. ROBIN** **ROUGHLEY, PETER J.** ***Surgery, McGill*** Dermatan sulfate proteoglycans of human articular cartilage **1990-91 EP Apr 90–Mar 91** *MT-7185*	$ 365,848/79-89 49,929/89-90 50,081/90-91	1452	**POZNANSKY, MARK J.** ***Physiology, Alberta*** Soluble enzyme albumin polymers: new approaches to enzyme/peptide therapy **1990-91 EP Apr 90–Mar 91** *MT-5825*	$ 742,901/76-89 86,758/89-90 88,239/90-91

List No.	Grant/Award	Financial History
1453	**PRATO, FRANK S.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* **WISENBERG, GERALD** *Medicine, Western Ontario* **DROST, DICK J.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* Magnetic resonance imaging of the heart **1990-91 EP Apr 90–Mar 91** *MA-9467*	$ 89,150/85-89 57,118/89-90 67,262/90-91
1454	**PREIKSAITIS, JUTTA K.** *Medicine, Alberta* Cytomegalovirus infection in allograft recipients: epidemiology and pathogenesis *1990-91 expenditure breakdown: research support, $63,875; equipment, $2,500* **1990-91 EP Apr 90–Mar 91** *MA-10348*	$ 62,000/88-89 62,000/89-90 66,375/90-91
1455	**PREVEC, LUDVIK A.** *Biology, McMaster* **GRAHAM, FRANK L.** *Biology, McMaster* **ROSENTHAL, KENNETH L.** *Pathology, McMaster* Human adenovirus-based expression vectors for immunodeficiency virus antigens **1990-91 EP Jul 90–Mar 91** *MA-10006*	$ 96,250/87-89 13,750/89-90 47,350/90-91
1456	**PREWITT, RICHARD M.** *Medicine, Manitoba* Thrombolysis and pulmonary hypertension **1990-91 EP Apr 90–Mar 91** *MA-9181*	$ 152,809/85-89 42,024/89-90 44,617/90-91
1457	**PRICE, COLIN** *Dentistry, British Columbia* Magnetic resonance imaging of the temporomandibular joint in young adults **1990-91 EP Apr 90–Mar 91** *MA-10603*	$ 15,361/89-90 13,990/90-91
1458	**PRICE, GERALD B.** *Medicine, McGill* Somatic cell analysis of malignant lymphoma **1990-91 EP Apr 90–Mar 91** *MA-9269*	$ 197,497/85-89 56,304/89-90 57,392/90-91
1459	**PRICHARD, ROGER K.** **SMITH, JAMES M.** *Parasitology, McGill* Glutathione, oxygen metabolites and oltipraz in S. mansoni **1990-91 EP Apr 90–Mar 91** *MA-9881*	$ 98,940/87-89 64,762/89-90 53,698/90-91
1460	**PRITCHARD, KATHLEEN I.** *Medicine, Toronto* **FINE, SHELDON** *Medicine, Toronto* **PATERSON, ALEXANDER H.G.** *Medicine, Alberta* A trial of adjuvant therapy in postmenopausal women with axillary node positive breast cancer **1990-91 EP Apr 90–Mar 91** *MA-8163*	$ 299,865/84-89 67,379/89-90 72,830/90-91
1461	**PRITCHARD, P. HAYDN** *Pathology, British Columbia* High density lipoprotein deficiency (fish eye disease): determination of the biochemical and molecular defect *1990-91 expenditure breakdown: research support, $40,450; equipment, $7,100* **1990-91 EP Jul 90–Mar 91** *MA-11048*	$ 47,550/90-91
1462	**PRITZKER, KENNETH P.H.** *Pathology, Toronto* **CRUZ, TONY F.** *Clinical Biochemistry, Toronto* Chondrocyte pyrophosphatase activity regulation: solution for calcium pyrophosphate dihydrate crystal arthropathy? **1990-91 EP Apr 90–Mar 91** *MA-10627*	$ 46,975/89-90 53,300/90-91
1463	**PROKOPIW, IGOR** *Medicine, Western Ontario* Adrenergic regulation of gastric blood flow **1990-91 EP Apr 90–Mar 91** *MT-10629*	$ 78,481/89-90 61,975/90-91
1464	**PROSS, HUGH F.** *Microbiology and Immunology, Queen's* **TAGUCHI, KENNETH** *Surgery, Queen's* Reactivity and regulation of biological response modifier-sensitive lymphocytes in tumour-bearing subjects **1990-91 EP Apr 90–Mar 91** *MA-8709*	$ 240,697/84-89 60,000/89-90 60,000/90-91
1465	**PROULX, PIERRE R.** *Biochemistry, Ottawa* Metabolism of lipids and structure-function relationships in E. coli and intestinal cell membranes *MA-2632*	$ 656,919/67-89 44,125/89-90 19,411/90-91
1466	**PUIL, ERNEST** *Pharmacology and Therapeutics, British Columbia* Synaptic mechaniams of anesthesia in neocortex **1990-91 EP Apr 90–Mar 91** *MA-10795*	$ 65,385/89-90 50,443/90-91
1467	**PULLEYBLANK, DAVID E.** *Biochemistry, Toronto* Non-B DNA structures *MA6130,-9879*	$ 739,007/77-89 139,132/89-90 69,378/90-91
1468	**QUAMME, GARY A.** *Medicine, British Columbia* Studies of renal electrolyte transport **1990-91 EP Apr 90–Mar 91** *MT-5793*	$ 709,230/75-89 94,554/89-90 95,472/90-91
1469	**QUASTEL, DAVID M.J.** *Pharmacology and Therapeutics, British Columbia* Electrophysiology and pharmacology of motor nerve terminals **1990-91 EP Apr 90–Mar 91** *MT-6817*	$ 272,548/81-89 45,469/89-90 45,469/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1470	**QUIK, MARYKA** ***Pharmacology and Therapeutics, McGill*** Cholinergic receptor regulation in the nervous system **1990-91 EP Apr 90–Jun 90** *MT-7254*	$ 417,834/80-89 49,286/89-90 11,597/90-91
1471	**QUIK, MARYKA** ***Pharmacology and Therapeutics, McGill*** Nicotinic acetylcholine receptors in the nervous system *1990-91 expenditure breakdown: research support, $53,731; equipment, $9,224* **1990-91 EP Jul 90–Mar 91** *MT-10893*	$ 62,955/90-91
1472	**QUILLEN, EDMOND W., JR.** **NUWAYHID, BAHIJ S.** ***Obstetrics and Gynecology, McGill*** Arterial pressure regulation during pregnancy **1990-91 EP Apr 90–Mar 91** *MA-9804*	$ 108,322/86-89 47,546/89-90 48,732/90-91
1473	**QUIRION, REMI** ***Psychiatrie, McGill*** Organisation et modulation de l'activité du neurone colinergique du proencéphale: implication possible pour la maladie d'Alzheimer **1990-91 EP avr 90–mar 91** *MA-8580*	$ 221,591/84-89 83,685/89-90 101,907/90-91
1474	**QURESHI, IJAZ A.** ***Pédiatrie, Montréal*** Studies on the therapeutic mechanisms in hyperammonemic syndromes *1990-91 ventilation des dépenses: aide à la recherche, $66,236; appareils, $5,400* **1990-91 EP avr 90–mar 91** *MT-9124*	$ 140,529/85-89 42,024/89-90 71,636/90-91
1475	**RABBANI, SHAFAAT A.** ***Medicine, McGill*** Biosynthesis, chemistry and biology of parathyroid hormone-like peptide of malignancy *1990-91 expenditure breakdown: research support, $41,370; equipment, $5,355* **1990-91 EP Apr 90–Mar 91** *MT-10630*	$ 46,725/90-91
1476	**RABINOVITCH, MARK A.** ***Medicine, McGill*** Early detection of volume overload heart failure by metaiodobenzylguanidine (iodine-123) scintigraphy **1990-91 EP Apr 90–Mar 91** *MA-9808*	$ 50,488/87-89 39,364/89-90 44,071/90-91
1477	**RABINOVITCH, MARLENE** ***Pediatrics, Toronto*** The ductus arteriosus: a model vessel to study the mechanism of intimal proliferation **1990-91 EP Apr 90–Mar 91** *MT-8546*	$ 263,248/84-89 85,152/89-90 103,243/90-91
1478	**RABKIN, SIMON W.** ***Medicine, British Columbia*** Endogenous opioids and cardiac arrhythmias **1990-91 EP Apr 90–Mar 91** *MA-8743*	$ 249,584/84-89 49,116/89-90 49,116/90-91

N° de liste	Subvention/Bourse	Résumé financier
1479	**RACHUBINSKI, RICHARD A.** ***Biochemistry, McMaster*** Studies in peroxisome biogenesis in the yeast Candida tropicalis and in rat liver **1990-91 EP Apr 90–Mar 91** *MA-9208*	$ 167,034/85-89 66,554/89-90 66,676/90-91
1480	**RACZ, WILLIAM J.** ***Pharmacology and Toxicology, Queen's*** Reactive metabolite-induced hepatotoxicity **1990-91 EP Apr 90–Mar 91** *MA-8112*	$ 177,709/83-89 57,094/89-90 43,382/90-91
1481	**RADZIOCH, DANUTA** ***Medicine, McGill*** Biochemical mechanisms of macrophage activation **1990-91 EP Apr 90–Mar 91** *MA-10707*	$ 50,770/89-90 54,360/90-91
1482	**RADZIUK, JERRY M.** ***Medicine, Ottawa*** Disposal of a carbohydrate load: tissue sites, metabolic pathways and regulation **1990-91 EP Apr 90–Mar 91** *MT-7334*	$ 511,997/80-89 78,795/89-90 86,938/90-91
1483	**RAESIDE, JAMES I.** ***Biomedical Sciences, Guelph*** Growth factors and testicular aromatase activity **1990-91 EP Apr 90–Mar 91** *MT-10631*	$ 30,679/89-90 40,905/90-91
1484	**RAJABI, MOHAMMAD R.** ***Obstetrics and Gynecology, McGill*** Studies on the mechanism of dilatation of uterine cervix at birth **1990-91 EP Apr 90–Mar 91** *MA-10632*	$ 47,859/89-90 45,805/90-91
1485	**RAJOTTE, RAYMOND V.** ***Surgery, Alberta*** Pancreatic islet cell isolation and cryopreservation for transplantation **1990-91 EP Apr 90–Mar 91** *MT-8030*	$ 279,250/83-89 67,000/89-90 67,000/90-91
1486	**RAKUSAN, KAREL J.** ***Physiology, Ottawa*** Oxygen determinants in normal and hypertrophic heart **1990-91 EP Apr 90–Mar 91** *MT-6672*	$ 296,076/79-89 40,000/89-90 47,447/90-91
1487	**RANGACHARI, PATANGI K.** ***Medicine, McMaster*** Peptides on transporting epithelia: pharmacological approaches **1990-91 EP Apr 90–Mar 91** *MT-9555*	$ 135,691/85-89 45,121/89-90 46,169/90-91
1488	**RANGACHARI, PATANGI K.** ***Medicine, McMaster*** **BELL, RUSSELL A.** ***Chemistry, McMaster*** Histamine on colonic epithelium **1990-91 EP Apr 90–Mar 91** *MT-10633*	$ 35,625/89-90 41,500/90-91

List No.	Grant/Award	Financial History
1489	**RASIO, EUGENIO** *Nutrition, Montréal* Capillary endothelial permeability: its study with the rete mirabile **1990-91 EP avr 90–mar 91** *MT-10634*	$ 50,734/89-90 60,805/90-91
1490	**RASIO, EUGENIO** **DES ROSIERS, CHRISTINE** **BRUNENGRABER, HENRI** *Nutrition, Montréal* Investigations in human nutritional biochemistry **1990-91 EP avr 90–mar 91** *MA-9575*	$ 130,000/85-89 57,118/89-90 67,376/90-91
1491	**RASMINSKY, MICHAEL** *Medicine, McGill* Physiologic aspects of regeneration in the mammalian central nervous system **1990-91 EP Apr 90–Mar 91** *MT-5077*	$ 491,328/73-89 40,507/89-90 40,507/90-91
1492	**RASMUSSON, DOUGLAS D.** *Physiology and Biophysics, Dalhousie* Reorganization of somatosensory pathways following peripheral nerve damage *1990-91 expenditure breakdown: research support, $53,428; equipment, $18,950* **1990-91 EP Apr 90–Mar 91** *MT-6673*	$ 314,504/79-89 42,802/89-90 72,378/90-91
1493	**RASSART, ERIC** *Sciences biologiques, Québec à Montréal* Etude moléculaire des virus murins de la leucémie **1990-91 EP avr 90–mar 91** *MA-7754*	$ 287,296/82-89 53,210/89-90 49,660/90-91
1494	**RASSART, ERIC** *Sciences biologiques, Québec à Montréal* **MILNE, ROSS W.** *Médecine, Montréal* **MARCEL, YVES L.** *Médecine, Montréal* Structure and function of apolipoprotein D **1990-91 EP avr 90–mar 91** *MA-9880*	$ 97,000/87-89 49,955/89-90 51,982/90-91
1495	**RATCLIFFE, MICHAEL J.H.** *Microbiology and Immunology, McGill* Control of B lymphocyte ontogeny **1990-91 EP Apr 90–Mar 91** *MA-10040*	$ 199,000/87-89 81,483/89-90 70,800/90-91
1496	**RAUCH, JOYCE** *Medicine, McGill* Induction of anti-phospholipid antibodies in mice **1990-91 EP Apr 90–Mar 91** *MT-10398*	$ 59,000/88-89 59,000/89-90 61,025/90-91
1497	**RAUTH, A. MICHAEL** *Medical Biophysics, Toronto* Potentiation and repair of damage in mammalian cells **1990-91 EP Apr 90–Mar 91** *MA-2234*	$ 768,596/66-89 74,000/89-90 74,000/90-91
1498	**RAYMOND, VINCENT** *Psychiatrie, Laval* Regulation of gene expression by mRNA stability *1990-91 ventilation des dépenses: aide à la recherche, $52,500; appareils, $15,000* **1990-91 EP jlt 90–mar 91** *MT-10967*	$ 67,500/90-91
1499	**RAYMOND, YVES** *Médecine, Montréal* Characterization of nuclear lamina proteins **1990-91 EP avr 90–mar 91** *MA-7755*	$ 295,261/82-89 59,870/89-90 58,460/90-91
1500	**RAYNER, DAVID C.** *Pathology, Manitoba* Regulation of experimental murine myelin immunity *MA-9676*	$ 120,008/86-89 44,889/89-90 23,005/90-91
1501	**READ, RANDY J.** *Medical Microbiology and Infectious Diseases, Alberta* Protein crystallography and rational drug design **1990-91 EP Jul 90–Mar 91** *MT-11000*	$ 48,750/90-91
1502	**READER, TOMAS A.** *Physiologie, Montréal* Regulation of monoamine receptors and uptake sites *1990-91 ventilation des dépenses: aide à la recherche, $53,292; appareils, $3,469* **1990-91 EP avr 90–mar 91** *MT-6967*	$ 318,423/81-89 49,999/89-90 56,761/90-91
1503	**REBEYKA, IVAN M.** **WILLIAMS, WILLIAM G.** *Surgery, Toronto* Rapid cooling injury in neonatal myocardium **1990-91 EP Apr 90–Mar 91** *MA-10635*	$ 52,565/89-90 70,087/90-91
1504	**REDFIELD, ROSEMARY J.** *Biochemistry, British Columbia* Regulation of transformational competence in Haemophilus influenzae *1990-91 expenditure breakdown: research support, $44,441; equipment, $25,000* **1990-91 EP Jul 90–Mar 91** *MA-10927*	$ 69,441/90-91
1505	**REGAN, DAVID M.** *Ophthalmology, Toronto* Psychophysical and electrophysiological assessment of sensory dysfunction **1990-91 EP Apr 90–Mar 91** *MT-9332*	$ 237,942/85-89 55,410/89-90 55,410/90-91
1506	**REGOECZI, ERWIN** *Pathology, McMaster* Studies of the behaviour in vivo of plasma glycoproteins with special reference to transferrin **1990-91 EP Apr 90–Mar 91** *MT-4074*	$ 1,065,429/70-89 90,063/89-90 103,422/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1507	**REGOLI, DOMENICO C.** ***Pharmacologie, Sherbrooke*** Pharmacology of peptide hormones **1990-91 EP avr 90–mar 91** *MT-4032*	$ 1,471,016/70-89 126,072/89-90 127,296/90-91	1516	**RENAUD, LEO P.** ***Medicine, Ottawa*** Hypothalamic neuroregulatory mechanisms **1990-91 EP Apr 90–Mar 91** *MT-5081*	$ 1,098,062/73-89 155,898/89-90 132,000/90-91
1508	**REH, THOMAS A.** ***Medical Physiology, Calgary*** Regulation of neural proliferation in visual system development **1990-91 EP Apr 90–Jun 90** *MA-9333*	$ 191,262/85-89 66,839/89-90 16,872/90-91	1517	**RENNIE, PAUL S.** ***Surgery, British Columbia*** **BRUCHOVSKY, NICHOLAS** ***Medicine, British Columbia*** Control of neoplastic growth by androgens **1990-91 EP Apr 90–Mar 91** *MT-10704*	$ 60,000/89-90 80,000/90-91
1509	**REID, GREGOR** ***Microbiology and Immunology, Western Ontario*** Prevention of catheter-associated urinary infections **1990-91 EP Apr 90–Mar 91** *MA-9994*	$ 92,550/87-89 60,372/89-90 65,769/90-91	1518	**RENTON, KENNETH W.** ***Pharmacology, Dalhousie*** Alteration of drug metabolism by interferon and infection *1990-91 expenditure breakdown: research support, $73,532; equipment, $3,700* **1990-91 EP Apr 90–Mar 91** *MT-6195*	$ 527,687/77-89 68,289/89-90 77,232/90-91
1510	**REID, ROBERT L.** ***Obstetrics and Gynecology, Queen's*** **KENNEDY, JAMES C.** ***Oncology, Queen's*** **CARMICHAEL, JOHN A.** ***Obstetrics and Gynecology, Queen's*** Endometrial ablation by photodynamic therapy **1990-91 EP Jul 90–Mar 91** *MA-11001*	$ 33,750/90-91	1519	**REUDELHUBER, TIMOTHY L.** ***Institut de recherches cliniques de Montréal*** Molecular determinants of active renin secretion *1990-91 ventilation des dépenses: aide à la recherche, $122,250; appareils, $27,000* **1990-91 EP jlt 90–mar 91** *MA-11179*	$ 149,250/90-91
1511	**REID, RONALD E.** ***Pharmaceutical Sciences, British Columbia*** Calcium regulation of calmodulin *MA-8758*	$ 195,092/84-89 43,299/89-90 35,181/90-91	1520	**REYNOLDS, JAMES N.** ***Basic Medical Sciences, Memorial University of Newfoundland*** Cellular molecular mechanisms of sedative-hypnotic drug action *1990-91 expenditure breakdown: research support, $31,500; equipment, $17,700* **1990-91 EP Jul 90–Mar 91** *MT-10946*	$ 49,200/90-91
1512	**REID, RONALD E.** ***Pharmaceutical Sciences, British Columbia*** Chemical regulation of calmodulin **1990-91 EP Apr 90–Mar 91** *MA-10636*	$ 30,000/89-90 40,000/90-91	1521	**REYNOLDS, JOHN D.** ***Medical Physiology, Calgary*** The contribution of Peyer's patches to the immune system **1990-91 EP Apr 90–Mar 91** *MT-8140*	$ 381,635/83-89 87,900/89-90 87,900/90-91
1513	**REINER, NEIL E.** ***Medicine, British Columbia*** Monocyte activation *1990-91 expenditure breakdown: research support, $76,600; equipment, $13,477* **1990-91 EP Apr 90–Mar 91** *MT-8633*	$ 233,357/84-89 52,000/89-90 90,077/90-91	1522	**RICHARDS, JAMES F.** ***Biochemistry, British Columbia*** Hormonal regulation of polyamine formation *MA-7756*	$ 262,564/82-89 46,226/89-90 20,337/90-91
1514	**REINER, PETER B.** ***Psychiatry, British Columbia*** Cellular and molecular neurobiology of behavioral state: histaminergic mechanisms *1990-91 expenditure breakdown: research support, $42,259; equipment, $5,388* **1990-91 EP Apr 90–Mar 91** *MT-10399*	$ 36,446/88-89 36,446/89-90 47,647/90-91	1523	**RICHARDSON, CHRISTOPHER D.** ***Microbiology and Immunology, McGill*** Inhibitory agents of host cell penetration by membrane viruses **1990-91 EP Apr 90–Mar 91** *MA-10638*	$ 27,510/89-90 36,680/90-91
1515	**REMMERS, JOHN E.** ***Medicine, Calgary*** Neural mechanisms controlling breathing **1990-91 EP Apr 90–Mar 91** *MA-9719*	$ 239,473/86-89 109,000/89-90 109,000/90-91	1524	**RICHARDSON, PETER M.** ***Surgery, McGill*** Neural injury **1990-91 EP Apr 90–Mar 91** *MA-8116*	$ 254,217/83-89 55,866/89-90 58,780/90-91

List No.	Grant/Award	Financial History
1525	**RICHARDSON, THOMAS L.** *Kinesiology, Simon Fraser* Ephaptic interactions in the hippocampus **1990-91 EP Apr 90–Mar 91** *MT-10639*	$ 85,457/89-90 33,942/90-91
1526	**RICHARDSON, VERNON J.** **FORD, CHRISTOPHER H.J.** *Surgery, Memorial University of Newfoundland* Preclinical evaluation of doxorubicin-monoclonal and bispecific antibody immunoconjugates **1990-91 EP Apr 90–Mar 91** *MT-10640*	$ 59,286/89-90 69,715/90-91
1527	**RICHMOND, FRANCES J.R.** *Physiology, Queen's* Structural and functional specializations in skeletal muscles **1990-91 EP Apr 90–Sep 90** *MT-7112*	$ 464,267/79-89 99,860/89-90 38,968/90-91
1528	**RIEDER, MICHAEL J.** *Pediatrics, Western Ontario* Pharmacogenetic predisposition to and immunologic consequences of sulphonamide adverse drug reactions **1990-91 EP Apr 90–Mar 91** *MT-10641*	$ 32,748/89-90 43,664/90-91
1529	**RIGATTO, HENRIQUE** *Pediatrics and Child Health, Manitoba* Development of respiratory control in the fetus and newborn infant **1990-91 EP Apr 90–Mar 91** *MT-4980*	$ 992,175/73-89 113,465/89-90 105,142/90-91
1530	**RIOPELLE, RICHARD J.** *Medicine, Queen's* Growth, maintenance and regeneration of the axon **1990-91 EP Apr 90–Mar 91** *MT-7757*	$ 347,599/82-89 67,540/89-90 67,540/90-91
1531	**RIORDAN, JOHN R.** *Clinical Biochemistry, Toronto* Myelin proteolipid protein expression and function **1990-91 EP Jul 90–Mar 91** *MA-11152*	$ 42,900/90-91
1532	**RIORDAN, JOHN R.** *Clinical Biochemistry, Toronto* Membrane glycoproteins: P-glycoprotein in multidrug resistance **1990-91 EP Apr 90–Mar 91** *MT-5066*	$ 750,936/73-89 78,795/89-90 90,078/90-91
1533	**RIOUX, FRANCIS R.** *Pharmacologie, Laval* Neurotensin and the peritoneal, capsaicin-sensitive primary afferents *MA-6550*	$ 401,361/78-89 63,036/89-90 44,278/90-91
1534	**RIP, JACK W.** *Biochemistry, Western Ontario* Dolichol metabolism in lysosomes *1990-91 expenditure breakdown: research support, $31,666; equipment, $13,798* **1990-91 EP Jul 90–Mar 91** *MA-10928*	$ 45,464/90-91
1535	**RITCHIE, J.W. KNOX** *Obstetrics and Gynecology, Toronto* Hypoxia and regional vascular resistance in the growth restricted fetus **1990-91 EP Apr 90–Sep 90** *MA-10459*	$ 28,700/89-90 17,000/90-91
1536	**RITTMASTER, ROGER S.** *Medicine, Dalhousie* Dihydrotestosterone metabolism in normal and hyperandrogenic conditions **1990-91 EP Apr 90–Mar 91** *MA-9619*	$ 142,214/85-89 42,952/89-90 42,952/90-91
1537	**ROACH, ARTHUR H.** *Medical Genetics, Toronto* Regulation of neurotransmitter gene expression by electrical activity *MA-10400*	$ 57,174/88-89 49,224/89-90 25,227/90-91
1538	**ROACH, MARGOT R.** *Medical Biophysics, Western Ontario* Dissecting aneurysms **1990-91 EP Apr 90–Mar 91** *MA-10642*	$ 60,000/89-90 80,000/90-91
1539	**ROAD, JEREMY D.** *Medicine, British Columbia* Abdominal muscles and breathing **1990-91 EP Apr 90–Mar 91** *MT-10643*	$ 32,093/89-90 38,000/90-91
1540	**ROBAIRE, BERNARD** *Pharmacology and Therapeutics, McGill* Regulation of the hypothalamo-pituitary-gonadal axis in the male **1990-91 EP Apr 90–Mar 91** *MA-9247*	$ 151,489/85-89 48,417/89-90 50,785/90-91
1541	**ROBAIRE, BERNARD** *Pharmacology and Therapeutics, McGill* Regulation of epididymal function **1990-91 EP Apr 90–Mar 91** *MT-9248*	$ 221,250/85-89 55,000/89-90 55,000/90-91
1542	**ROBERTS, DAVID C.S.** *Psychology, Carleton* Intravenous drug self-administration in rats **1990-91 EP Apr 90–Mar 91** *MT-10401*	$ 39,865/88-89 33,750/89-90 44,662/90-91
1543	**ROBERTS, EVE A.** *Pediatrics, Toronto* Regulation of induction of the cytochrome P450IA family in the human liver: investigation of the Ah receptor in human hepatocytes in vitro **1990-91 EP Apr 90–Jun 90** *MA-9359*	$ 152,379/85-89 35,547/89-90 8,364/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1544	**ROBERTS, EVE A.** ***Pediatrics, Toronto*** Preservation, function and regulation of human hepatic cytochromes P450 in a long-term primary hepatocyte culture system *1990-91 expenditure breakdown: research support, $44,624; equipment, $4,888* **1990-91 EP Jul 90–Mar 91** *MT-10996*	$ 49,512/90-91	1552	**RODER, JOHN C.** ***Immunology, Toronto*** Isolation of the beige gene **1990-91 EP Apr 90–Mar 91** *MA-7114*	$ 523,535/79-89 77,144/89-90 78,123/90-91
1545	**ROBERTSON, HAROLD A.** ***Pharmacology, Dalhousie*** D1/D2 dopamine receptor agonist interactions and the role of L-Dopa in the treatment of Parkinson's disease **1990-91 EP Apr 90–Mar 91** *MT-10644*	$ 58,719/89-90 40,959/90-91	1553	**RODRIGUEZ, MIGUEL A.** ***Biochemistry, Ottawa*** Adipose tissue glyceride synthesis in hyperlipoproteinemia **1990-91 EP Apr 90–Mar 91** *MA-9996*	$ 84,000/87-89 51,600/89-90 35,200/90-91
1546	**ROBERTSON, HAROLD A.** ***Pharmacology, Dalhousie*** Neuronal plasticity in the kindling of an experimental predisposition to epileptiform convulsions *1990-91 expenditure breakdown: research support, $70,715; equipment, $26,388* **1990-91 EP Apr 90–Mar 91** *MT-10402*	$ 69,340/88-89 64,340/89-90 97,103/90-91	1554	**ROGERS, JAMES A.** ***Pharmacy and Pharmaceutical Sciences, Alberta*** Polymer-coated liposomes for the oral administration of drugs **1990-91 EP Apr 90–Mar 91** *MA-10646*	$ 38,447/89-90 46,389/90-91
1547	**ROBERTSON, JANET A.** ***Medical Microbiology and Infectious Diseases, Alberta*** Characterization of Ureaplasma urealyticum **1990-91 EP Apr 90–Mar 91** *MA-7759*	$ 535,055/74-89 56,000/89-90 56,000/90-91	1555	**ROGERS, KEM A.** ***Anatomy, Western Ontario*** Dietary fish oil supplementation and the porcine model of atherosclerosis *1990-91 expenditure breakdown: research support, $61,460; equipment, $3,600* **1990-91 EP Jul 90–Mar 91** *MA-10895*	$ 65,060/90-91
1548	**ROBINSON, BRIAN H.** ***Biochemistry, Toronto*** Heterogeneity of lacticacidosis *1990-91 expenditure breakdown: research support, $150,922; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MT-6573*	$ 818,643/78-89 136,578/89-90 160,922/90-91	1556	**ROLA-PLESZCZYNSKI, MAREK** ***Pédiatrie, Sherbrooke*** Immunorégulation par les leucotriènes **1990-91 EP avr 90–mar 91** *MT-6822*	$ 411,723/81-89 73,752/89-90 74,468/90-91
1549	**ROBINSON, GILBERT B.** ***Psychology, New Brunswick*** The effects of kindled seizures on behavioural learning **1990-91 EP Apr 90–Jun 90** *MA-10325*	$ 55,000/88-89 35,000/89-90 8,750/90-91	1557	**ROLA-PLESZCZYNSKI, MAREK** **STANKOVA, JANA** ***Pédiatrie, Sherbrooke*** Immunorégulation pulmonaire dans la pathogenèse des pneumoconioses **1990-91 EP avr 90–mar 91** *MT-9339*	$ 257,938/85-89 81,947/89-90 89,987/90-91
1550	**ROBINSON, JOHN J.** ***Biochemistry, Memorial University of Newfoundland*** Role of the sea urchin extraembryonic hyaline layer in embryonic development **1990-91 EP Apr 90–Mar 91** *MT-10294*	$ 49,000/88-89 42,000/89-90 48,250/90-91	1558	**ROMASCHIN, ALEXANDER D.** ***Clinical Biochemistry, Toronto*** Oxidant stress in ischemic/reperfused myocardium **1990-91 EP Apr 90–Mar 91** *MA-9997*	$ 66,872/87-89 47,894/89-90 53,717/90-91
1551	**ROCHET, ANNE P.** ***Speech Pathology and Audiology, Alberta*** Treatment efficacy in facial muscle retraining: interaction of EMG and traditional exercise methods **1990-91 EP Apr 90–Mar 91** *MT-10645*	$ 25,642/89-90 14,417/90-91	1559	**ROMPRE, PIERRE-PAUL** ***Psychology, Concordia*** Midbrain dopamine depolarization inactivation: behavioral studies *1990-91 expenditure breakdown: research support, $38,865; equipment, $3,074* **1990-91 EP Apr 90–Mar 91** *MT-10204*	$ 35,800/88-89 27,300/89-90 41,939/90-91
			1560	**RONCARI, DANIEL A.K.** ***Medicine, Toronto*** Characterization of fat cell precursors and their possible relationship to obesity: effects of hormones and growth factors *1990-91 expenditure breakdown: research support, $112,096; equipment, $4,960* **1990-91 EP Apr 90–Mar 91** *MT-8460*	$ 795,355/76-89 96,655/89-90 117,056/90-91

List No.	Grant/Award	Financial History
1561	**ROOTMAN, DAVID S.** **BASU, PRASANTA K.** ***Ophthalmology, Toronto*** Evaluation of a novel continuous flow scleral shell for ophthalmic therapy **1990-91 EP Jul 90–Mar 91** *MA-10947*	$ 26,250/90-91
1562	**RORABECK, CECIL H.** **FINLAY, J. BRYAN** **BOURNE, ROBERT B.** ***Surgery, Western Ontario*** Variation of surface strains on pelvic bone due to acetabular cup design *1990-91 expenditure breakdown: research support, $47,992; equipment, $18,067* **1990-91 EP Jul 90–Mar 91** *MA-11052*	$ 66,059/90-91
1563	**RORSTAD, OTTO P.** ***Medicine, Calgary*** Mechanism of vasoactive intestinal peptide action **1990-91 EP Apr 90–Mar 91** *MT-6855*	$ 244,455/81-89 42,077/89-90 42,077/90-91
1564	**ROSE, ANN M.** ***Medical Genetics, British Columbia*** Organization and expression of genes in chromosome I of C. elegans *1990-91 expenditure breakdown: research support, $88,203; equipment, $6,000* **1990-91 EP Apr 90–Mar 91** *MT-7762*	$ 361,998/82-89 75,000/89-90 94,203/90-91
1565	**ROSE, P. KENNETH** ***Physiology, Queen's*** Functional architecture of neck motoneurons in the cat **1990-91 EP Apr 90–Sep 90** *MT-5829*	$ 574,927/76-89 70,025/89-90 35,012/90-91
1566	**ROSEN, CHERYL F.** ***Medicine, Toronto*** Effects of ultraviolet radiation on mammalian keratinocytes **1990-91 EP Apr 90–Mar 91** *MA-10647*	$ 43,880/89-90 41,987/90-91
1567	**ROSENBERG, ALAN M.** ***Pediatrics, Saskatchewan*** Studies on the interaction of anticollagen antibodies with the collagen-like segment of C1q: effect on complement activation **1990-91 EP Apr 90–Mar 91** *MA-10649*	$ 26,294/89-90 35,058/90-91
1568	**ROSENBERG, LAWRENCE** ***Surgery, McGill*** A new approach to treatment of diabetes in man **1990-91 EP Apr 90–Mar 91** *MA-10648*	$ 37,450/89-90 46,200/90-91
1569	**ROSENTHAL, KENNETH L.** ***Pathology, McMaster*** Induction and specificity of antiviral cytotoxic T lymphocytes **1990-91 EP Apr 90–Mar 91** *MA-7487*	$ 368,828/81-89 65,137/89-90 63,416/90-91
1570	**ROSSANT, JANET** ***Medical Genetics, Toronto*** Molecular genetic analysis of the trophoblast lineage in the mouse embryo **1990-91 EP Apr 90–Mar 91** *MT-7765*	$ 428,802/82-89 52,813/89-90 121,936/90-91
1571	**ROTH, SHELDON H.** ***Pharmacology and Therapeutics, Calgary*** Selective actions of anaesthetic agents **1990-91 EP Apr 90–Jun 90** *MA-9199*	$ 163,605/85-89 49,221/89-90 12,425/90-91
1572	**ROTHSTEIN, ASER** ***Medical Biophysics, Toronto*** **GRINSTEIN, SERGIO** ***Biochemistry, Toronto*** Role of ion transport in the regulation of cellular volume and cytoplasmic pH **1990-91 EP Apr 90–Mar 91** *MT-4665*	$ 1,491,044/72-89 146,654/89-90 149,757/90-91
1573	**ROTSTEIN, ORI D.** ***Surgery, Toronto*** Induction of macrophage procoagulant activity by Bacteroides species: a potential mechanism for abscess formation **1990-91 EP Apr 90–Mar 91** *MA-9259*	$ 146,360/85-89 39,891/89-90 40,728/90-91
1574	**ROUGHLEY, PETER J.** ***Surgery, McGill*** The synthesis of proteoglycans by human articular cartilage **1990-91 EP Apr 90–Mar 91** *MT-9422*	$ 156,829/85-89 45,701/89-90 49,613/90-91
1575	**ROULEAU, GUY A.** ***Neurology and Neurosurgery, McGill*** Identification of the neurofibromatosis 2 gene *1990-91 expenditure breakdown: research support, $58,725; equipment, $50,000* **1990-91 EP Jul 90–Mar 91** *MT-10831*	$ 108,725/90-91
1576	**ROULEAU, JACQUES R.** ***Médecine, Laval*** Studies on the determinants of transmural myocardial blood flow regulation **1990-91 EP avr 90–jui 90** *MT-6312*	$ 559,479/77-89 66,932/89-90 15,749/90-91
1577	**ROULEAU, JACQUES R.** ***Médecine, Laval*** Studies of the determinants of myocardial blood flow regulation **1990-91 EP jlt 90–mar 91** *MA-10851*	$ 66,116/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1578	**ROULEAU, JEAN-L.** *Médecine, Sherbrooke* **CARDINAL, RENE** *Pharmacologie, Montréal* **NADEAU, REGINALD A.** *Médecine, Montréal* **SAVARD, PIERRE** *Génie biomédical, Montréal* Evaluation et modification de l'insuffisance cardiaque et de ses conséquences post-infarctus **1990-91 EP avr 90–mar 91** *MT-8566*	$ 214,410/84-89 60,000/89-90 65,850/90-91
1579	**ROUSSEAU, ERIC C.** *Physiologie et biophysique, Sherbrooke* Etude des propriétés du récepteur à la ryanodine du reticulum sarcoplasmique de muscle squelettique *1990-91 ventilation des dépenses: aide à la recherche, $28,982; appareils, $29,896* **1990-91 EP avr 90–mar 91** *MT-10326*	$ 39,250/88-89 21,667/89-90 51,878/90-91
1580	**ROUSSOS, CHARIS S.** *Medicine, McGill* Phrenic nerve afferents **1990-91 EP Apr 90–Mar 91** *MA-10650*	$ 32,250/89-90 43,000/90-91
1581	**ROWDEN, GEOFFREY** *Pathology, Dalhousie* **LEE, SPENCER H.S.** *Microbiology, Dalhousie* Immunoregulatory circuits in the skin **1990-91 EP Apr 90–Mar 91** *MA-8600*	$ 256,047/84-89 74,795/89-90 74,795/90-91
1582	**ROWLANDS, JOHN A.** **HYNES, DAVID M.** *Radiology, Toronto* Fundamental factors in digital radiography: fluoroscopy **1990-91 EP Apr 90–Mar 91** *MA-9117*	$ 197,775/85-89 76,428/89-90 72,423/90-91
1583	**ROWLANDS, JOHN A.** *Radiology, Toronto* Fundamental factors in digital radiography: photoconductive plates with laser readout **1990-91 EP Apr 90–Mar 91** *MA-10651*	$ 51,724/89-90 64,965/90-91
1584	**ROY, CLAUDE C.** *Pédiatrie, Montréal* **LEVY, EMILE H.** *Nutrition, Montréal* Rôle des radicaux libres et du Ca++ dans les hépatopathies; étude génétique et métabolique de la maladie de rétention des chylomicrons *1990-91 ventilation des dépenses: aide à la recherche, $119,760; appareils, $39,495* **1990-91 EP avr 90–mar 91** *MT-4433*	$ 1,040,481/71-89 110,526/89-90 159,255/90-91
1585	**ROY, DENIS R.** *Medicine, McGill* Effects of vasopressin, angiotensin II and other peptides on deep nephron functions in rodents *MA-9592*	$ 171,224/85-89 50,097/89-90 121/90-91
1586	**ROY, JEAN-PIERRE** *Neurology and Neurosurgery, McGill* Contribution of the dorso-medial subdivision of the medial superior temporal area to the spatial functions of the parieta[1] cortex *1990-91 expenditure breakdown: research support, $37,318; equipment, $77,066* **1990-91 EP Jul 90–Mar 91** *MA-11002*	$ 114,384/90-91
1587	**ROY, PAUL H.** *Biochimie, Laval* Characterization of a novel mechanism of site-specific recombination involved in antibiotic resistance gene rearrangements **1990-91 EP avr 90–mar 91** *MT-10652*	$ 53,250/89-90 71,000/90-91
1588	**ROY, RAYNALD** *Médecine, Laval* **BOISJOLY, HELENE M.** *Otorhinolaryngologie et ophtalmologie, Laval* Penetrating keratoplasty outcome: contribution of the host immune response *MA-10404*	$ 44,246/88-89 44,246/89-90 19,357/90-91
1589	**ROYAL, ANDRE** *Médecine, Montréal* Regulation of gene expression in differentiating F9 cells *MA-10405*	$ 64,770/88-89 64,770/89-90 52,626/90-91
1590	**RUBIN, LAURENCE A.** *Medicine, Toronto* Family studies in rheumatic disease: restriction fragment length polymorphism analysis as a means of delineating the molecular genetic basis of ankylosing spondylitis and rheumatoid arthritis **1990-91 EP Apr 90–Mar 91** *MA-10653*	$ 45,600/89-90 52,000/90-91
1591	**RUDD, NOREEN L.** *Pediatrics, Calgary* Evaluation of aneuploidy in vitro **1990-91 EP Apr 90–Mar 91** *MT-10654*	$ 26,610/89-90 35,480/90-91
1592	**RUIZ-CARRILLO, ADOLFO** *Biochimie, Laval* Molecular control of histone gene expression **1990-91 EP avr 90–mar 91** *MT-9106*	$ 261,264/85-89 75,552/89-90 75,552/90-91
1593	**RUIZ-PETRICH, ELENA** *Physiologie et biophysique, Sherbrooke* Physiopathologie des altérations électriques du myocarde: les courants potassiques *1990-91 ventilation des dépenses: aide à la recherche, $51,540; appareils, $23,967* **1990-91 EP avr 90–mar 91** *MT-2859*	$ 641,246/67-89 47,500/89-90 75,507/90-91

List No.	Grant/Award	Financial History
1594	**RURAK, DANNY W.** *Obstetrics and Gynecology, British Columbia* **WITTMAN, BERND K.** *Obstetrics and Gynecology, British Columbia* **AXELSON, JAMES E.** *Pharmaceutical Sciences, British Columbia* Pharmacokinetics, placental transfer and fetal effects of antihistamines (H1 receptor blockers) in pregnant sheep: fetal antihistamine effects in the human **1990-91 EP Apr 90–Sep 90** *MA-8643*	$ 221,579/84-89 53,281/89-90 26,642/90-91
1595	**RURAK, DANNY W.** *Obstetrics and Gynecology, British Columbia* Factors affecting fetal oxygen consumption **1990-91 EP Apr 90–Sep 90** *MA-6459*	$ 443,357/78-89 63,077/89-90 31,307/90-91
1596	**RUSAK, BENJAMIN** *Psychology, Dalhousie* Mechanisms of circadian rhythm entrainment *1990-91 expenditure breakdown: research support, $54,886; equipment, $6,919* **1990-91 EP Apr 90–Mar 91** *MT-8929*	$ 172,328/84-89 43,075/89-90 61,805/90-91
1597	**RUTT, BRIAN K.** **FENSTER, AARON** **CUNNINGHAM, IAN A.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* Development of new techniques in magnetic resonance imaging for quantitative blood flow characterization **1990-91 EP Apr 90–Mar 91** *MA-10655*	$ 42,068/89-90 56,090/90-91
1598	**RUZSICSKA, BELA P.** *Médecine nucléaire et radiobiologie, Sherbrooke* Mécanisme photochimique de réparation de dimères de pyrimidine par l'ADN photolyase **1990-91 EP avr 90–mar 91** *MA-10656*	$ 43,782/89-90 48,000/90-91
1599	**RYAN, EDMOND A.** *Medicine, Alberta* The effects of diabetes during pregnancy on insulin secretion and insulin action in the offspring *1990-91 expenditure breakdown: research support, $41,759; equipment, $3,700* **1990-91 EP Jul 90–Mar 91** *MT-10916*	$ 45,459/90-91
1600	**RYLETT, R. JANE** *Physiology, Western Ontario* Regulation of choline transport and choline acetyltransferase at the cholinergic neuron *1990-91 expenditure breakdown: research support, $47,003; equipment, $2,164* **1990-91 EP Jul 90–Mar 91** *MT-10864*	$ 49,167/90-91

N° de liste	Subvention/Bourse	Résumé financier
1601	**RYLETT, R. JANE** *Physiology, Western Ontario* Studies on the regulation of choline transport and choline acetyltransferase in the cholinergic nerve terminal **1990-91 EP Apr 90–Jun 90** *MA-7635*	$ 354,960/82-89 53,149/89-90 12,506/90-91
1602	**SACKS, STEPHEN L.** *Medicine, British Columbia* Noninvasive diagnosis of herpesviral infections **1990-91 EP Apr 90–Mar 91** *MA-10661*	$ 26,333/89-90 79,000/90-91
1603	**SADOWSKI, IVAN J.** *Biochemistry, British Columbia* Transcriptional control by protein phosphorylation *1990-91 expenditure breakdown: research support, $52,556; equipment, $20,000* **1990-91 EP Jul 90–Mar 91** *MT-10833*	$ 72,556/90-91
1604	**SADOWSKI, PAUL D.** *Medical Genetics, Toronto* Site-specific recombination of yeast DNA **1990-91 EP Apr 90–Mar 91** *MT-7943*	$ 1,104,954/83-89 182,692/89-90 175,000/90-91
1605	**SAINT-CYR, JEAN A.** *Anatomy, Toronto* Inferotemporal and limbic projections to the caudate nucleus **1990-91 EP Apr 90–Mar 91** *MT-10662*	$ 68,463/89-90 77,950/90-91
1606	**SAINT-HILAIRE, JEAN-MARC** *Médecine, Montréal* **ACHIM, ANDRE** *Psychologie, Québec à Montréal* **RICHER, FRANCOIS** *Psychologie, Québec à Montréal* Localisation EEG-MEG en épilepsie **1990-91 EP avr 90–mar 91** *MA-9220*	$ 128,009/85-89 38,166/89-90 39,328/90-91
1607	**SAIRAM, MALUR R.** *Institut de recherches cliniques de Montréal* Significance of gonadal proteins and peptides **1990-91 EP avr 90–mar 91** *MA-6136*	$ 375,554/77-89 49,379/89-90 49,379/90-91
1608	**SAIRAM, MALUR R.** *Institut de recherches cliniques de Montréal* Studies on gonadotropins and receptors **1990-91 EP avr 90–mar 91** *MT-5475*	$ 664,290/78-89 78,480/89-90 79,242/90-91
1609	**SALERNO, TOMAS A.** *Surgery, Toronto* The effects of metabolic washout versus oxygen delivery in the continuous oxygenated cardioplegia technique **1990-91 EP Apr 90–Mar 91** *MA-8044*	$ 182,130/83-89 50,000/89-90 50,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1610	**SALERNO, TOMAS A.** *Surgery, Toronto* **HOOD, DAVID A.** *Physical Education, York* The hypertrophied heart's response to stress *MA-7870*	$ 173,625/82-89 34,150/89-90 17,503/90-91
1611	**SALTER, ROBERT B.** *Surgery, Toronto* Continuing experimental investigations on the biological effects of continuous passive motion on the healing and regeneration of articular and periarticular tissues **1990-91 EP Apr 90–Mar 91** *MT-10001*	$ 152,804/87-89 89,937/89-90 102,815/90-91
1612	**SANDERS, ESMOND J.** *Physiology, Alberta* Physiological and morphological aspects of cellular interactions of early development *1990-91 expenditure breakdown: research support, $60,166; equipment, $6,745* **1990-91 EP Apr 90–Mar 91** *MT-4376*	$ 365,708/71-89 42,955/89-90 66,911/90-91
1613	**SANDHAM, H. JAMES** *Dentistry, Toronto* Microbial management of dental caries **1990-91 EP Apr 90–Mar 91** *MA-9877*	$ 159,624/87-89 89,207/89-90 89,281/90-91
1614	**SANDOR, THOMAS** *Médecine, Montréal* Comparative biochemistry of steroids **1990-91 EP avr 90–mar 91** *MA-9572*	$ 128,616/85-89 43,153/89-90 43,153/90-91
1615	**SANWAL, BISHNU D.** *Biochemistry, Western Ontario* Biochemistry and genetics of cytodifferentiation *1990-91 expenditure breakdown: research support, $95,135; equipment, $6,000* **1990-91 EP Apr 90–Mar 91** *MT-4687*	$ 817,868/72-89 89,301/89-90 101,135/90-91
1616	**SANWAL, BISHNU D.** *Biochemistry, Western Ontario* Control mechanisms **1990-91 EP Apr 90–Mar 91** *MT-3576*	$ 1,650,522/69-89 150,824/89-90 152,288/90-91
1617	**SARFATI, MARIE** *Médecine, Montréal* IgE-binding factors in human milk **1990-91 EP jlt 90–mar 91** *MA-10012*	$ 56,875/87-89 8,125/89-90 23,381/90-91
1618	**SARKAR, BIBUDHENDRA** *Biochemistry, Toronto* Molecular mechanisms of transport, accumulation and excretion of metals **1990-91 EP Apr 90–Mar 91** *MT-1800*	$ 785,176/65-89 73,542/89-90 76,858/90-91
1619	**SASTRY, BHAGAVATULA R.** *Pharmacology and Therapeutics, British Columbia* Pharmacological studies on long-term synaptic potentiation in the hippocampus **1990-91 EP Apr 90–Mar 91** *MT-6193*	$ 603,819/77-89 66,187/89-90 59,595/90-91
1620	**SASYNIUK, BETTY I.** *Pharmacology and Therapeutics, McGill* Studies on the mechanisms of drug-induced arrhythmias **1990-91 EP Apr 90–Mar 91** *MT-10663*	$ 48,751/89-90 44,000/90-91
1621	**SAUDER, DANIEL N.** *Medicine, McMaster* Immunoregulatory epidermal factors **1990-91 EP Apr 90–Mar 91** *MA-8584*	$ 231,052/84-89 66,320/89-90 72,048/90-91
1622	**SAUVE, REMY** *Physiologie, Montréal* Etude en "patch-clamp" et Fura-2 de l'homéostasie du Ca+ + chez les cellules non excitables *1990-91 ventilation des dépenses: aide à la recherche, $53,214; appareils, $15,000* **1990-91 EP avr 90–mar 91** *MT-7769*	$ 264,364/82-89 50,429/89-90 68,214/90-91
1623	**SAVARD, PIERRE** *Médecine, Laval* Analyse cellulaire et moléculaire des potentialités génétiques des tissus régénérateurs de l'amphibian urodèle **1990-91 EP avr 90–mar 91** *MT-10664*	$ 54,000/89-90 52,000/90-91
1624	**SAWYNOK, JANA** *Pharmacology, Dalhousie* Non-opioid mechanisms of antinociception **1990-91 EP Apr 90–Mar 91** *MT-9198*	$ 142,909/85-89 40,973/89-90 48,679/90-91
1625	**SAWYNOK, JANA** **WHITE, THOMAS D.** *Pharmacology, Dalhousie* Purine release in opioid and sensory transmission **1990-91 EP Apr 90–Mar 91** *MT-10302*	$ 44,500/88-89 40,500/89-90 54,449/90-91
1626	**SCHACHAR, NORMAN S.** *Surgery, Calgary* **MCGANN, LOCKSLEY E.** *Pathology, Alberta* Cryopreservation of articular cartilage for transplantation **1990-91 EP Apr 90–Mar 91** *MA-8573*	$ 279,877/84-89 78,833/89-90 78,833/90-91
1627	**SCHACHAR, RUSSELL** *Psychiatry, Toronto* Impulsivity and childhood psychopathology **1990-91 EP Apr 90–Mar 91** *MA-10665*	$ 34,467/89-90 45,956/90-91

List No.	Grant/Award	Financial History
1628	**SCHACHTER, HARRY** ***Biochemistry, Toronto*** Glycoproteins: metabolism, structure and function **1990-91 EP Apr 90–Mar 91** *MT-3285*	$ 1,325,273/68-89 134,365/89-90 143,847/90-91
1629	**SCHANNE, OTTO F.M.** ***Physiologie et biophysique, Sherbrooke*** Activité spontanée dans des cellules ventriculaires **1990-91 EP avr 90–mar 91** *MT-10666*	$ 35,904/89-90 47,872/90-91
1630	**SCHELLENBERG, R. ROBERT** ***Medicine, British Columbia*** Mechanisms of airway hyperresponsiveness *1990-91 expenditure breakdown: research support, $58,124; equipment, $4,691* **1990-91 EP Apr 90–Mar 91** *MT-8017*	$ 267,395/83-89 58,496/89-90 62,815/90-91
1631	**SCHIFFRIN, ERNESTO L.** ***Médecine, Montréal*** Angiotensin and vasopressin receptor signaling in vascular smooth muscle in experimental hypertension **1990-91 EP avr 90–mar 91** *MT-10667*	$ 72,163/89-90 61,374/90-91
1632	**SCHIFFRIN, ERNESTO L.** ***Médecine, Montréal*** Receptors for atrial natriuretic peptide in hypertension **1990-91 EP avr 90–mar 91** *MA-9112*	$ 191,073/85-89 57,486/89-90 59,988/90-91
1633	**SCHILLER, PETER W.** ***Institut de recherches cliniques de Montréal*** Molecular pharmacology of neuropeptides **1990-91 EP avr 90–mar 91** *MT-5655*	$ 662,791/75-89 79,544/89-90 82,959/90-91
1634	**SCHIMMER, BERNARD P.** ***Banting and Best Department of Medical Research, Toronto*** Hormonal regulation of adenylyl cyclase and of steroidogenic P450 gene expression *1990-91 expenditure breakdown: research support, $129,258; equipment, $900* **1990-91 EP Apr 90–Mar 91** *MT-3861*	$ 1,298,191/69-89 120,336/89-90 130,158/90-91
1635	**SCHIPPER, HYMAN M.** ***Neurology and Neurosurgery, McGill*** Role of Gomori astrocytes in estradiol neurotoxicity *1990-91 expenditure breakdown: research support, $40,596; equipment, $7,500* **1990-91 EP Jul 90–Mar 91** *MT-11078*	$ 48,096/90-91
1636	**SCHLICHTER, LYANNE C.** ***Physiology, Toronto*** Ion channels and transport in cytotoxic cells *MA-9620*	$ 137,428/85-89 44,304/89-90 35,997/90-91
1637	**SCHMIDT, BRIAN J.** ***Medicine, Manitoba*** Investigation of neural mechanisms generating locomotion using an in vitro model of the mammalian spinal cord **1990-91 EP Apr 90–Mar 91** *MT-10668*	$ 47,600/89-90 52,000/90-91
1638	**SCHNEIDER, WOLFGANG J.** ***Biochemistry, Alberta*** Receptor-mediated control of oocyte growth **1990-91 EP Apr 90–Mar 91** *MA-9083*	$ 209,608/85-89 91,694/89-90 92,796/90-91
1639	**SCHNEIDERMAN, JACOB H.** ***Medicine, Toronto*** Mechanisms underlying spontaneous field potentials in the hippocampal slice: modulation by convulsants and anticonvulsants *1990-91 expenditure breakdown: research support, $46,626; equipment, $11,081* **1990-91 EP Apr 90–Mar 91** *MT-7771*	$ 267,837/82-89 48,719/89-90 57,707/90-91
1640	**SCHNETKAMP, PAUL P.M.** ***Medical Biochemistry, Calgary*** Visual transduction in vertebrate rod photoreceptors **1990-91 EP Apr 90–Mar 91** *MA-10013*	$ 82,250/87-89 52,610/89-90 54,480/90-91
1641	**SCHOLEY, JAMES W.** ***Medicine, Toronto*** Glomerular hemodynamic function and structure in experimental diabetes **1990-91 EP Apr 90–Mar 91** *MT-10669*	$ 98,179/89-90 60,548/90-91
1642	**SCHRADER, JOHN W.** ***Medicine, British Columbia*** Molecular regulation of normal hemopoiesis **1990-91 EP Jul 90–Mar 91** *MA-11034*	$ 45,375/90-91
1643	**SCHRYVERS, ANTHONY B.** ***Microbiology and Infectious Diseases, Calgary*** Analysis of the receptors for human transferrin and lactoferrin **1990-91 EP Apr 90–Mar 91** *MT-10350*	$ 58,327/88-89 41,000/89-90 62,788/90-91
1644	**SCHULMAN, HERBERT M.** **PONKA, PREMYSL** ***Lady Davis Institute for Medical Research, Sir Mortimer B. Davis-Jewish General Hospital*** Transferrin and intracellular iron metabolism **1990-91 EP Apr 90–Mar 91** *MA-4079*	$ 635,875/70-89 56,622/89-90 58,836/90-91
1645	**SCHULTZ, GILBERT A.** ***Medical Biochemistry, Calgary*** Control processes in early mammalian development **1990-91 EP Apr 90–Mar 91** *MT-4854*	$ 686,989/72-89 64,918/89-90 65,644/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1646	**SCHURCH, F. SAMUEL** *Medical Physiology, Calgary* Physical properties of alveolar and airway surfactant **1990-91 EP Apr 90–Mar 91** *MT-6435*	$ 477,526/78-89 74,392/89-90 83,433/90-91
1647	**SCHURR, ERWIN** *Medicine, McGill* **GROS, PHILIPPE** *Biochemistry, McGill* Chloroquine resistance in malaria parasites *1990-91 expenditure breakdown: research support, $60,099; equipment, $10,000* **1990-91 EP Jul 90–Mar 91** *MT-10842*	$ 70,099/90-91
1648	**SCHWARZ, DIETRICH W.F.** *Surgery, British Columbia* Sound code for cochlear implants **1990-91 EP Apr 90–Mar 91** *MT-5597*	$ 499,434/74-89 68,289/89-90 55,355/90-91
1649	**SCHWARZ, DIETRICH W.F.** *Surgery, British Columbia* Noise protection of the ear by its efferent innervation **1990-91 EP Apr 90–Mar 91** *MT-3311*	$ 355,227/83-89 73,672/89-90 70,150/90-91
1650	**SCOTT, J. ELLIOTT** *Dentistry, Manitoba* Regulation of synthesis and secretion in fetal type II alveolar cells **1990-91 EP Apr 90–Mar 91** *MA-10351*	$ 39,210/88-89 39,210/89-90 43,514/90-91
1651	**SCOTT, PAUL G.** *Dentistry, Alberta* Proteoglycan structure and function **1990-91 EP Apr 90–Mar 91** *MT-6126*	$ 484,204/77-89 103,032/89-90 79,621/90-91
1652	**SCOTT, PAUL G.** *Dentistry, Alberta* Collagen-degrading proteinases from cells of human gingiva **1990-91 EP Apr 90–Mar 91** *MT-6008*	$ 524,030/76-89 69,393/89-90 69,393/90-91
1653	**SCOTT, R. BRENT** *Pediatrics, Calgary* Gastrointestinal motility **1990-91 EP Apr 90–Mar 91** *MT-10014*	$ 80,100/87-89 46,968/89-90 68,081/90-91
1654	**SCOTT, ROBERT N.** **PARKER, PHILIP A.** *Electrical Engineering, New Brunswick* Myoelectric signal characterization in amputees **1990-91 EP Apr 90–Mar 91** *MA-10015*	$ 33,243/87-89 24,247/89-90 25,997/90-91
1655	**SCRABA, DOUGLAS G.** *Biochemistry, Alberta* Studies of a mammalian picornavirus; biological electron microscopy **1990-91 EP Apr 90–Mar 91** *MT-8946*	$ 339,815/84-89 90,000/89-90 90,000/90-91
1656	**SEEMAN, PHILIP** *Pharmacology, Toronto* Postmortem brain dopamine receptors in schizophrenia **1990-91 EP Apr 90–Mar 91** *MA-2951*	$ 841,978/67-89 89,115/89-90 89,115/90-91
1657	**SEEMAN, PHILIP** *Pharmacology, Toronto* Ligand assessment for positron tomography of receptors **1990-91 EP Apr 90–Mar** *MT-10670*	$ 43,086/89-90 57,448/90-91
1658	**SEEMAYER, THOMAS A.** *Pathology, McGill* Insular gene regulation/expression in the diabetic BB rat **1990-91 EP Apr 90–Mar 91** *MA-7636*	$ 335,932/82-89 56,324/89-90 58,877/90-91
1659	**SEFTON, MICHAEL V.** *Chemical Engineering and Applied Chemistry, Toronto* Insulin delivery by microencapsulated pancreatic islets **1990-91 EP Apr 90–Mar 91** *MA-6825*	$ 333,975/81-89 65,101/89-90 67,908/90-91
1660	**SEFTON, MICHAEL V.** *Chemical Engineering and Applied Chemistry, Toronto* **ZINGG, WALTER** *Biomedical Engineering, Toronto* Surface modified materials-blood interactions **1990-91 EP Jul 90–Mar 91** *MT-11041*	$ 60,000/90-91
1661	**SEGAL, BERNARD** *Physiology, McGill* Clinical assessment of functional vestibular capability *MA-9715*	$ 73,492/86-89 22,704/89-90 11,636/90-91
1662	**SEGALL, JACQUELINE M.** *Biochemistry, Toronto* Sporulation-specific gene expression in yeast **1990-91 EP Apr 90–Mar 91** *MT-6826*	$ 438,255/81-89 80,000/89-90 80,000/90-91
1663	**SEGALL, JACQUELINE M.** *Biochemistry, Toronto* Transcription factors for RNA polymerase III **1990-91 EP Apr 90–Mar 91** *MT-10352*	$ 36,000/88-89 36,000/89-90 40,950/90-91
1664	**SEGUIN, CARL** *Physiologie, Laval* **MESSIER, PAUL-EMIL** *Anatomie, Montréal* Gene expression in the neuroectoderm of the amphibian embryo **1990-91 EP avr 90–mar 91** *MT-10671*	$ 30,078/89-90 34,600/90-91

List No.	Grant/Award	Financial History
1665	**SEGUIN, CARL** *Physiologie, Laval* Regulation of the mouse metallothionein-1 gene expression **1990-91 EP avr 90–mar 91** *MA-9821*	$ 117,580/86-89 56,129/89-90 51,681/90-91
1666	**SEIDMAN, ERNEST G.** *Pédiatrie, Montréal* Immunologie intestinale **1990-91 EP avr 90–mar 91** *MA-10016*	$ 84,374/87-89 53,573/89-90 48,301/90-91
1667	**SEKALY, RAFICK-P.** *Microbiologie et immunologie, Montréal* Molecular basis for the immunodeficiency observed in AIDS patients *1990-91 ventilation des dépenses: aide à la recherche, $69,200; appareils, $11,000* **1990-91 EP avr 90–mar 91** *MT-10116*	$ 65,000/88-89 65,000/89-90 80,200/90-91
1668	**SEKALY, RAFICK-P.** *Microbiologie et immunologie, Montréal* Molecular analysis of T cell receptor assembly and function **1990-91 EP avr 90–mar 91** *MA-10055*	$ 117,250/87-89 69,008/89-90 70,216/90-91
1669	**SELLS, BRUCE H.** *Molecular Biology and Genetics, Guelph* Molecular biology of ribosome biogenesis **1990-91 EP Apr 90–Mar 91** *MT-9298*	$ 210,915/85-89 61,220/89-90 64,894/90-91
1670	**SENCIALL, IAN R.** *Biochemistry, Memorial University of Newfoundland* Steroid carboxylic acids *MA-5403*	$ 660,442/74-89 65,000/89-90 52,813/90-91
1671	**SENECAL, JEAN-LUC** *Médecine, Montréal* Anticytoskeletal and anticentromere autoantibodies in rheumatic diseases **1990-91 EP avr 90–mar 91** *MT-8045*	$ 225,322/83-89 51,677/89-90 51,677/90-91
1672	**SERGENT, JUSTINE** *Neurology and Neurosurgery, McGill* Hemispheric specialization and cooperation in visual cognition *1990-91 expenditure breakdown: research support, $47,325; equipment, $35,000* **1990-91 EP Apr 90–Mar 91** *MT-10353*	$ 98,566/88-89 30,000/89-90 8[illegible]5/90-91
1673	**SESSLE, BARRY J.** *Dentistry, Toronto* Neural mechanisms of orofacial function **1990-91 EP Apr 90–Mar 91** *MT-4918*	$ 861,664/73-89 120,189/89-90 91,462/90-91
1674	**SEVERSON, DAVID L.** *Pharmacology and Therapeutics, Calgary* Regulation of cardiac metabolism **1990-91 EP Apr 90–Mar 91** *MT-6000*	$ 510,784/77-89 60,649/89-90 61,238/90-91

N° de liste	Subvention/Bourse	Résumé financier
1675	**SHAFFER, ELDON A.** *Medicine, Calgary* Cholesterol gallstone disease: gallbladder function and factors regulating biliary lipid secretion **1990-91 EP Apr 90–Mar 91** *MT-5080*	$ 770,294/73-89 106,000/89-90 106,000/90-91
1676	**SHAIKH, NISAR A.** *Medicine, Toronto* Effect of the antiarrhythmic drug amiodarone on lipid metabolism *MA-10354*	$ 50,000/88-89 50,000/89-90 25,625/90-91
1677	**SHARMA, RAJENDRA K.** *Medical Biochemistry, Calgary* Myristoylation of cellular proteins **1990-91 EP Apr 90–Mar 91** *MA-10672*	$ 37,500/89-90 50,000/90-91
1678	**SHARPE, JAMES A.** *Medicine, Toronto* Visual motor control in neurological disease **1990-91 EP Apr 90–Mar 91** *MT-5404*	$ 477,677/74-89 42,103/89-90 42,103/90-91
1679	**SHEAR, NEIL H.** *Medicine, Toronto* Mechanisms of drug toxicity to skin *MA-9716*	$ 169,351/86-89 52,361/89-90 36,653/90-91
1680	**SHEFCHYK, SUSAN J.** *Medicine, Manitoba* Neural control of micturition **1990-91 EP Apr 90–Mar 91** *MA-9828*	$ 80,515/86-89 43,538/89-90 38,051/90-91
1681	**SHEININ, ROSE** *Microbiology, Toronto* Studies on DNA and chromatin replication in mammalian cells **1990-91 EP Apr 90–Jun 90** *MT-1819*	$ 1,057,377/65-89 88,250/89-90 22,277/90-91
1682	**SHELDON, ROBERT S.** *Medicine, Calgary* Antiarrhythmic drug receptor **1990-91 EP Apr 90–Mar 91** *MT-10327*	$ 53,750/88-89 45,000/89-90 55,936/90-91
1683	**SHERMAN, IGOR A.** *Biomedical Engineering, Toronto* **SAIBIL, FRED G.** *Medicine, Toronto* Quantitative studies of hepatic and intestinal microcirculation *MA-9144*	$ 164,379/85-89 40,973/89-90 21,099/90-91
1684	**SHERMAN, MORRIS** *Medicine, Toronto* An in vitro analysis of the process of rat liver carcinogenesis *MA-10175*	$ 55,000/88-89 55,000/89-90 38,500/90-91
1685	**SHERMAN, PHILIP M.** *Pediatrics, Toronto* Mechanism of adherence of attaching and effacing Escherichia coli **1990-91 EP Apr 90–Mar 91** *MA-9317*	$ 149,644/85-89 61,481/89-90 62,795/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1686	**SHERWIN, ALLAN L.** *Neurology and Neurosurgery, McGill* Studies of phosphoinositol-generated second messengers in focally epileptic human brain **1990-91 EP Apr 90–Mar 91** *MT-1451*	$ 697,166/63-89 66,318/89-90 53,505/90-91	1696	**SHULMAN, MARC J.** *Immunology, Toronto* Site-directed mutagenesis of mammalian chromosomal genes by homologous recombination **1990-91 EP Apr 90–Mar 91** *MA-9167*	$ 82,199/85-89 81,668/89-90 95,918/90-91
1687	**SHERWIN, BARBARA B.** *Psychology, McGill* Effects of sex steroids on affect and memory in menopausal women **1990-91 EP Apr 90–Mar 91** *MA-8707*	$ 129,576/84-89 37,200/89-90 37,200/90-91	1697	**SHULMAN, MARC J.** *Immunology, Toronto* Structural basis of immunoglobulin function **1990-91 EP Apr 90–Mar 91** *MT-7207*	$ 455,408/80-89 81,422/89-90 82,212/90-91
1688	**SHERWOOD, NANCY M.** *Biology, Victoria* Gonadotropin-releasing hormone: characterization of a family of peptides **1990-91 EP Apr 90–Mar 91** *MA-8916*	$ 212,001/84-89 57,000/89-90 57,000/90-91	1698	**SILVERMAN, EARL D.** **LAXER, RONALD M.** *Pediatrics, Toronto* Autoantibodies in neonatal lupus erythematosus **1990-91 EP Jul 90–Mar 91** *MT-10877*	$ 73,994/90-91
1689	**SHIN, SEON H.** *Physiology, Queen's* Neuroendocrinology of prolactin **1990-91 EP Apr 90–Mar 91** *MT-4884*	$ 954,687/72-89 83,208/89-90 74,104/90-91	1699	**SILVIUS, JOHN R.** *Biochemistry, McGill* Fusion and lipid distributions of natural and artificial membranes **1990-91 EP Apr 90–Mar 91** *MA-7776*	$ 316,850/82-89 75,571/89-90 81,193/90-91
1690	**SHIRAZI-ADL, ABOULFAZL** *Génie mécanique, Montréal* Biomechanics of the human lumbar spine **1990-91 EP avr 90–mar 91** *MA-10705*	$ 15,199/89-90 20,265/90-91	1700	**SIMA, ANDERS A.F.** *Pathology, Manitoba* **MURPHY, LIAM J.** *Medicine, Manitoba* Synthesis and responsiveness to trophic factors by diabetic nerve of the BB rat **1990-91 EP Apr 90–Mar 91** *MT-10673*	$ 52,733/89-90 64,627/90-91
1691	**SHIU, ROBERT P.C.** *Physiology, Manitoba* Prolactin inducible gene in human breast cancer: a model to study the molecular biology of hormone action and potential clinical application **1990-91 EP Apr 90–Mar 91** *MT-6248*	$ 780,719/77-89 100,000/89-90 100,000/90-91	1701	**SIMA, ANDERS A.F.** *Pathology, Manitoba* Pathogenesis of diabetic microvasculopathy **1990-91 EP Apr 90–Mar 91** *MA-10674*	$ 35,513/89-90 47,351/90-91
1692	**SHIZGAL, HARRY M.** *Surgery, McGill* Studies to evaluate nutritional therapy using body composition measurements **1990-91 EP Apr 90–Mar 91** *MT-4321*	$ 767,565/71-89 66,599/89-90 65,000/90-91	1702	**SIMINOSKI, KERRY G.** *Medicine, Alberta* Regulation of nerve growth factor activity **1990-91 EP Apr 90–Mar 91** *MT-10675*	$ 37,500/89-90 50,000/90-91
1693	**SHIZGAL, PETER** *Psychology, Concordia* Neural substrate for brain stimulation reward *1990-91 expenditure breakdown: research support, $45,940; equipment, $11,626* **1990-91 EP Apr 90–Mar 91** *MT-8037*	$ 187,254/83-89 42,024/89-90 57,566/90-91	1703	**SIMINOVITCH, KATHERINE A.** *Medicine, Toronto* Analysis of the genetic origins and structural properties of human anti-DNA antibodies **1990-91 EP Apr 90–Mar 91** *MA-10730*	$ 39,830/89-90 49,000/90-91
1694	**SHORE, GORDON C.** *Biochemistry, McGill* Targeting of precusor proteins to mammalian mitochondria **1990-91 EP Apr 90–Mar 91** *MT-6192*	$ 818,054/77-89 134,477/89-90 156,241/90-91	1704	**SIMINOVITCH, KATHERINE A.** *Medicine, Toronto* A molecular approach to characterization of the genetic defect underlying an immune deficiency syndrome (Wiskett-Aldrich) **1990-91 EP Apr 90–Mar 91** *MA-9337*	$ 182,984/85-89 57,108/89-90 60,164/90-91
1695	**SHRIER, ALVIN** *Physiology, McGill* Electrophysiological studies of excitable cells in culture **1990-91 EP Apr 90–Mar 91** *MA-7337*	$ 337,012/80-89 65,860/89-90 54,677/90-91			

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1705	**SIMPSON, NANCY E.** *Pediatrics, Queen's* Identification of protein and DNA variation: their mapping and linkage with genetic disease **1990-91 EP Apr 90–Jun 90** *MT-5783*	$ 803,787/76-89 126,000/89-90 31,500/90-91	1715	**SINGH, BHAGIRATH** *Immunology, Alberta* Molecular basis of peptide antigen recognition by T lymphocytes **1990-91 EP Apr 90–Mar 91** *MA-10022*	$ 70,000/87-89 56,315/89-90 66,130/90-91
1706	**SIMS, STEPHEN M.** *Physiology, Western Ontario* Membrane currents in isolated smooth muscle cells: regulation by neurotransmitters **1990-91 EP Apr 90–Mar 91** *MA-10019*	$ 97,228/87-89 44,030/89-90 49,275/90-91	1716	**SINGH, GURMIT** *Pathology, McMaster* Mitochondrial DNA as a critical target for toxicity **1990-91 EP Apr 90–Mar 91** *MA-8509*	$ 153,869/85-89 42,060/89-90 42,480/90-91
1707	**SINCLAIR, JOHN G.** *Pharmaceutical Sciences, British Columbia* Studies on nociception *MA-9736*	$ 144,489/86-89 45,280/89-90 23,206/90-91	1717	**SINGHAL, SHARWAN K.** *Microbiology and Immunology, Western Ontario* Bone marrow in regulation of immunity **1990-91 EP Apr 90–Mar 91** *MA-4154*	$ 766,004/70-89 77,954/89-90 67,332/90-91
1708	**SINCLAIR, NICHOLAS R.ST.C.** *Microbiology and Immunology, Western Ontario* Regulation of the immune response **1990-91 EP Apr 90–Mar 91** *MT-10676*	$ 45,000/89-90 60,000/90-91	1718	**SIROIS, PIERRE** *Pharmacologie, Sherbrooke* Immunopharmacologie des leucotriènes **1990-91 EP avr 90–mar 91** *MT-7143*	$ 489,715/79-89 73,542/89-90 74,256/90-91
1709	**SINGAL, DHARAM P.** *Pathology, McMaster* Studies on the genetic polymorphism and functional roles of the HLA-D region genes **1990-91 EP Apr 90–Mar 91** *MA-10020*	$ 131,250/87-89 79,016/89-90 81,432/90-91	1719	**SIU, CHI-HUNG** *Banting and Best Department of Medical Research, Toronto* Signal transduction during differentiation of embryonal carcinoma cells **1990-91 EP Apr 90–Mar 91** *MA-8885*	$ 207,366/84-89 54,000/89-90 54,000/90-91
1710	**SINGAL, PAWAN K.** *Physiology, Manitoba* Changes in oxygen radical mechanisms in heart hypertrophy and failure **1990-91 EP Apr 90–Mar 91** *MA-7868*	$ 241,401/82-89 45,763/89-90 49,602/90-91	1720	**SIU, CHI-HUNG** *Banting and Best Department of Medical Research, Toronto* Molecular basis of cell-cell interactions during development *1990-91 expenditure breakdown: research support, $116,797; equipment, $2,822* **1990-91 EP Apr 90–Mar 91** *MT-6140*	$ 685,871/77-89 94,554/89-90 119,619/90-91
1711	**SINGER, MICHAEL A.** *Medicine, Queen's* The organization of biomembranes as derived from the study of model phospholipid systems *MA-4591*	$ 402,496/72-89 35,720/89-90 23,091/90-91	1721	**SIVAK, JACOB G.** *Optometry, Waterloo* Computer-assisted study of optical quality of the excised lens of the eye **1990-91 EP Apr 90–Mar 91** *MA-8610*	$ 124,676/84-89 32,704/89-90 32,704/90-91
1712	**SINGH, BHAGIRATH** *Immunology, Alberta* Characterization of functional sites on major histocompatibility complex antigens **1990-91 EP Apr 90–Jun 90** *MA-10021*	$ 119,976/87-89 58,276/89-90 13,712/90-91	1722	**SKAMENE, EMIL** *Medicine, McGill* Application of genetics to the study of macrophage responses to infection and cancer **1990-91 EP Apr 90–Mar 91** *MT-6431*	$ 930,018/78-89 151,011/89-90 152,478/90-91
1713	**SINGH, BHAGIRATH** *Immunology, Alberta* Investigation of functional sites on major histocompatibility complex molecules **1990-91 EP Jul 90–Mar 91** *MT-10992*	$ 52,962/90-91	1723	**SKANES, VERNA M.** *Immunology, Memorial University of Newfoundland* Allotypic variants of the fourth complement component **1990-91 EP Apr 90–Mar 91** *MA-9162*	$ 179,636/85-89 50,137/89-90 51,545/90-91
1714	**SINGH, BHAGIRATH** *Immunology, Alberta* Use of target cell-specific drug-immunoconjugates in immunotherapy of cancer and autoimmune disease **1990-91 EP Apr 90–Jun 90** *MT-9944*	$ 190,750/87-89 112,270/89-90 28,340/90-91			

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1724	**SKOV, KIRSTEN A.** *Pathology, British Columbia* **CHAPLIN, DAVID J.** *Pathology, British Columbia* **JAMES, BRIAN R.** *Chemistry, British Columbia* **FARRELL, NICHOLAS P.** *Chemistry, Vermont* Evaluation of metal complexes as radiosensitizers: DNA targeted nitroimidazoles and related metal complexes **1990-91 EP Apr 90–Mar 91** *MT-10356*	$ 54,000/88-89 54,000/89-90 61,100/90-91
1725	**SKUP, DANIEL S.** *Biochimie, Montréal* Regulation of gene expression in embryonal carcinoma cells **1990-91 EP avr 90–mar 91** *MT-9105*	$ 228,001/85-89 90,000/89-90 90,000/90-91
1726	**SLUTSKY, ARTHUR S.** *Medicine, Toronto* Non-conventional methods of ventilation **1990-91 EP Apr 90–Mar 91** *MA-8558*	$ 249,837/85-89 72,880/89-90 72,880/90-91
1727	**SMILEY, JAMES R.** *Pathology, McMaster* Control of herpes simplex virus gene expression **1990-91 EP Apr 90–Mar 91** *MT-7343*	$ 551,418/80-89 94,554/89-90 95,472/90-91
1728	**SMILEY, JAMES R.** *Pathology, McMaster* Expression of human papillomavirus type 16 genome in cultured cells **1990-91 EP Jul 90–Mar 91** *MT-10957*	$ 53,492/90-91
1729	**SMITH, CHARLES E.** *Dentistry, McGill* **NANCI, ANTONIO** *Médecine dentaire, Montréal* Resorptive and degradative roles of the ameloblast in enamel maturation **1990-91 EP Apr 90–Mar 91** *MA-9557*	$ 165,630/85-89 72,974/89-90 72,974/90-91
1730	**SMITH, DENNIS C.** *Dentistry, Toronto* Bonding to teeth *MA-10357*	$ 66,230/88-89 66,230/89-90 28,975/90-91
1731	**SMITH, MICHAEL** *Biochemistry, British Columbia* Studies on nucleic acids **1990-91 EP Apr 90–Mar 91** *MT-1706*	$ 2,572,614/65-89 224,198/89-90 226,375/90-91
1732	**SMITH, PETER A.** *Pharmacology, Alberta* Modulation of ganglionic transmission *1990-91 expenditure breakdown: research support, $57,820; equipment, $7,350* **1990-91 EP Apr 90–Mar 91** *MT-8078*	$ 219,447/83-89 39,782/89-90 65,170/90-91

N° de liste	Subvention/Bourse	Résumé financier
1733	**SMYTH, DONALD D.** *Pharmacology and Therapeutics, Manitoba* Alpha-2-adrenoceptors and sodium excretion in genetically hypertensive rats **1990-91 EP Apr 90–Mar 91** *MA-9621*	$ 140,868/85-89 38,423/89-90 38,423/90-91
1734	**SMYTH, DONALD D.** *Pharmacology and Therapeutics, Manitoba* Renal effects of vasopressin in hypertension **1990-91 EP Apr 90–Mar 91** *MA-10731*	$ 39,184/89-90 49,045/90-91
1735	**SNIDER, DENIS P.** *Pathology, McMaster* Targeting antigen to the gut mucosa *1990-91 expenditure breakdown: research support, $43,026; equipment, $12,000* **1990-91 EP Jul 90–Mar 91** *MA-10985*	$ 55,026/90-91
1736	**SNIDERMAN, ALLAN D.** *Medicine, McGill* Metabolic studies in hyperapobetalipoproteinemia **1990-91 EP Apr 90–Mar 91** *MT-5480*	$ 701,487/75-89 80,000/89-90 80,000/90-91
1737	**SNUTCH, TERRANCE P.** *Psychiatry, British Columbia* Molecular dissection of neurotransmitter receptors **1990-91 EP Apr 90–Mar 91** *MT-10677*	$ 89,930/89-90 65,505/90-91
1738	**SNYDER, FLOYD F.** *Medical Biochemistry, Calgary* Purine nucleoside metabolism and inherited metabolic disease **1990-91 EP Apr 90–Mar 91** *MT-6376*	$ 449,245/78-89 57,000/89-90 57,000/90-91
1739	**SNYDER, FLOYD F.** *Medical Biochemistry, Calgary* Molecular characterization of inherited enzyme variants **1990-91 EP Apr 90–Jun 90** *MA-8665*	$ 200,125/84-89 37,216/89-90 8,757/90-91
1740	**SNYDER, FLOYD F.** *Medical Biochemistry, Calgary* Molecular and cellular characterization of inherited enzyme variants **1990-91 EP Jul 90–Mar 91** *MT-11009*	$ 45,000/90-91
1741	**SNYDER, RICHARD E.** *Applied Sciences in Medicine, Alberta* The study of axonal transport using a multiple proportional counter **1990-91 EP Apr 90–Mar 91** *MA-9213*	$ 146,493/85-89 49,278/89-90 54,345/90-91
1742	**SOKOL, PAMELA A.** *Microbiology and Infectious Diseases, Calgary* Structure, function, and regulation of the Pseudomonas aeruginosa ferripyochelin-binding protein **1990-91 EP Apr 90–Mar 91** *MA-9420*	$ 157,822/85-89 47,282/89-90 49,033/90-91

List No.	Grant/Award	Financial History
1743	**SOLE, MICHAEL J.** *Medicine, Toronto* Pathogenesis of cardiomyopathy **1990-91 EP Apr 90–Mar 91** *MT-8027*	$ 384,075/83-89 81,126/89-90 80,081/90-91
1744	**SOLOMON, SAMUEL** *Medicine, McGill* Hormonal control of fetal development **1990-91 EP Apr 90–Mar 91** *MA-1658*	$ 2,612,622/64-89 190,409/89-90 177,064/90-91
1745	**SONENBERG, NAHUM** *Biochemistry, McGill* Eukaryotic mRNA structure-function relationship and control of protein synthesis **1990-91 EP Apr 90–Mar 91** *MT-7214*	$ 2,115,488/70-89 210,120/89-90 212,160/90-91
1746	**SONNENBERG, HARALD** *Physiology, Toronto* **WILSON, DOUGLAS R.** *Medicine, Alberta* Transport regulation in the medullary collecting duct **1990-91 EP Apr 90–Mar 91** *MT-2836*	$ 1,521,056/68-89 112,000/89-90 112,000/90-91
1747	**SPEERT, DAVID P.** *Pediatrics, British Columbia* The mechanism of nonopsonic phagocytosis by macrophages and polymorphonuclear leukocytes **1990-91 EP Apr 90–Mar 91** *MA-9462*	$ 147,485/85-89 53,197/89-90 60,961/90-91
1748	**SPENCE, ANDREW M.** *Medical Genetics, Toronto* Molecular biology of sex determination in C. elegans *1990-91 expenditure breakdown: research support, $17,500; equipment, $52,000* **1990-91 EP Jan 91–Mar 91** *MA-10887*	$ 69,500/90-91
1749	**SPIEGELMAN, GEORGE B.** *Microbiology, British Columbia* **GRIGLIATTI, THOMAS A.** *Zoology, British Columbia* Regulation of gene expression in Drosophila **1990-91 EP Apr 90–Jun 90** *MT-10024*	$ 117,250/87-89 69,010/89-90 17,420/90-91
1750	**SPIEGELMAN, GEORGE B.** *Microbiology, British Columbia* Mechanism of transcription initiation *MA-9558*	$ 161,251/85-89 47,770/89-90 33,440/90-91
1751	**SPIELBERG, STEPHEN P.** *Pediatrics, Toronto* Pharmacogenetics of human adverse drug reactions **1990-91 EP Apr 90–Mar 91** *MT-7489*	$ 392,075/81-89 60,656/89-90 61,245/90-91
1752	**SPINO, MICHAEL** **THIESSEN, JAKE J.** *Pharmacy, Toronto* Drug disposition in cystic fibrosis **1990-91 EP Apr 90–Mar 91** *MA-9738*	$ 140,472/86-89 55,000/89-90 55,000/90-91
1753	**SRIVASTAVA, ASHOK K.** *Médecine, Montréal* Studies on protein tyrosine kinases **1990-91 EP avr 90–mar 91** *MA-10678*	$ 33,750/89-90 45,000/90-91
1754	**ST-LOUIS, JEAN** *Obstétrique et gynécologie, Montréal* Mécanismes physiopathologiques des changements de tonus vasculaire chez la rate gestante *MA-9302*	$ 171,523/85-89 49,378/89-90 21,723/90-91
1755	**ST-PIERRE, DIANE M.M.** *Physical and Occupational Therapy, McGill* Recovery of muscle function from disuse: effects of exercise training *MA-10328*	$ 40,000/88-89 20,500/89-90 8,969/90-91
1756	**STAINES, WILLIAM A.** *Anatomy, Ottawa* Neurotransmitters and connections of the basal ganglia and the tuberomammillary nucleus **1990-91 EP Apr 90–Mar 91** *MA-10025*	$ 86,351/87-89 44,692/89-90 45,689/90-91
1757	**STANISZ, ANDRZEJ M.** *Pathology, McMaster* Neuropeptide modulation of mucosal immunity *MA-10358*	$ 42,500/88-89 42,500/89-90 21,781/90-91
1758	**STEEVES, JOHN D.** *Zoology, British Columbia* Neuronal repair in embryonic spinal cord *1990-91 expenditure breakdown: research support, $49,549; equipment, $8,000* **1990-91 EP Apr 90–Mar 91** *MT-10359*	$ 32,800/88-89 32,800/89-90 57,549/90-91
1759	**STEINBRECHER, URS P.** *Medicine, British Columbia* Pathogenesis of atherosclerosis *1990-91 expenditure breakdown: research support, $59,775; equipment, $5,170* **1990-91 EP Apr 90–Mar 91** *MT-8630*	$ 238,677/84-89 54,000/89-90 64,945/90-91
1760	**STEINER, GEORGE** *Medicine, Toronto* Regulation of very low-density lipoprotein-triglyceride production **1990-91 EP Apr 90–Mar 91** *MT-2834*	$ 1,791,984/60-89 136,137/89-90 132,687/90-91
1761	**STELL, WILLIAM K.** *Anatomy, Calgary* Peptidergic neurones and synaptic pathways in the retina **1990-91 EP Apr 90–Mar 91** *MA-7389*	$ 403,221/80-89 59,045/89-90 59,045/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1762	**STELL, WILLIAM K.** ***Anatomy, Calgary*** Regulation of neuronal development in the retina **1990-91 EP Apr 90–Mar 91** *MT-6833*	$ 303,092/80-89 60,169/89-90 60,169/90-91
1763	**STEPHENS, NEWMAN L.** ***Physiology, Manitoba*** The biophysics and biochemistry of airway smooth muscle *1990-91 expenditure breakdown: research support, $80,217; equipment, $2,470* **1990-91 EP Apr 90–Mar 91** *MT-2694*	$ 742,360/67-89 78,795/89-90 82,687/90-91
1764	**STERIADE, MIRCEA** ***Physiologie, Laval*** Activities of brainstem cholinergic neurons in relation with excitatory and inhibitory processes in thalamic neurons **1990-91 EP avr 90–mar 91** *MT-3689*	$ 1,040,805/69-89 111,482/89-90 97,423/90-91
1765	**STEVENS, JOHN K.** ***Physiology, Toronto*** Intracellular mechanisms for generating and controlling nerve cell shape: the neuronal cytoskeleton **1990-91 EP Apr 90–Jun 90** *MT-7345*	$ 375,084/80-89 54,069/89-90 13,517/90-91
1766	**STEVENSON, BRUCE R.** ***Anatomy and Cell Biology, Alberta*** Molecular dynamics of ZO-1 and the tight junction **1990-91 EP Apr 90–Mar 91** *MT-10680*	$ 39,528/89-90 52,704/90-91
1767	**STEVENSON, MARY M.** ***Medicine, McGill*** Murine malaria: cellular mechanisms of host resistance to Plasmodium chabaudi AS **1990-91 EP Apr 90–Mar 91** *MA-7785*	$ 322,371/82-89 65,821/89-90 65,205/90-91
1768	**STEWART, DUNCAN J.** **LANGLEBEN, DAVID** **CERNACEK, PETER** ***Medicine, McGill*** Vascular production of endothelin: physiological and pathophysiological importance *1990-91 expenditure breakdown: research support, $51,974; equipment, $8,975* **1990-91 EP Jul 90–Mar 91** *MT-10960*	$ 60,949/90-91
1769	**STEWART, DUNCAN J.** ***Medicine, McGill*** Endothelium-derived relaxing factor in the coronary resistance bed: physiological and pathophysiological significance **1990-91 EP Apr 90–Mar 91** *MT-10360*	$ 43,027/88-89 37,580/89-90 37,580/90-91
1770	**STEWART, JANE** ***Psychology, Concordia*** Conditioned physiological changes to repeated administration of psychoactive drugs **1990-91 EP Apr 90–Mar 91** *MA-6678*	$ 340,522/79-89 50,954/89-90 51,449/90-91
1771	**STEWART, PATRICIA A.** ***Anatomy, Toronto*** The blood-brain barrier in alcoholic encephalopathy *MA-10349*	$ 68,852/88-89 63,352/89-90 44,346/90-91
1772	**STEWART, PATRICIA A.** ***Anatomy, Toronto*** Development of the blood-brain barrier *1990-91 expenditure breakdown: research support, $61,334; equipment, $2,500* **1990-91 EP Apr 90–Mar 91** *MT-10361*	$ 69,967/88-89 60,875/89-90 63,834/90-91
1773	**STEWART, RICHARD C.** ***Microbiology and Immunology, McGill*** Molecular mechanism of bacterial chemotaxis *1990-91 expenditure breakdown: research support, $50,108; equipment, $48,400* **1990-91 EP Jul 90–Mar 91** *MT-10826*	$ 98,508/90-91
1774	**STEWART-PHILLIPS, JEAN L.** ***Medicine, McGill*** **LOUGH, JOHN O.** ***Pathology, McGill*** The genetics of susceptibility to diet-induced atherosclerosis in RI strains of mice **1990-91 EP Apr 90–Mar 91** *MA-10056*	$ 78,750/87-89 51,500/89-90 47,000/90-91
1775	**STINSON, ROBERT A.** ***Pathology, Alberta*** Studies of human alkaline phosphatases **1990-91 EP Apr 90–Mar 91** *MT-4857*	$ 550,652/72-89 68,392/89-90 57,049/90-91
1776	**STOESSL, A. JONATHAN** ***Clinical Neurological Sciences, Western Ontario*** Peptide-dopamine interactions in ageing and Parkinson's disease **1990-91 EP Apr 90–Mar 91** *MT-10681*	$ 61,538/89-90 52,157/90-91
1777	**STOLTZ, DONALD B.** ***Microbiology, Dalhousie*** Viruses, parasitism and immunity in insects *1990-91 expenditure breakdown: research support, $45,119; equipment, $13,669* **1990-91 EP Apr 90–Mar 91** *MA-5975*	$ 360,946/77-89 42,024/89-90 58,788/90-91
1778	**STREJAN, GILL H.** ***Microbiology and Immunology, Western Ontario*** Helper T cells and their lymphokines in isotype-selective regulation **1990-91 EP Apr 90–Mar 91** *MA-10732*	$ 62,263/89-90 79,894/90-91

List No.	Grant/Award	Financial History
1779	**STRICKLAND, KENNETH P.** ***Biochemistry, Western Ontario*** Membrane activities and functions involving phosphoinositide and Ca2+ metabolism in brain and in normal and dystrophic muscle cell cultures **1990-91 EP Apr 90–Mar 91** *MT-0617*	$ 1,333,857/56-89 107,004/89-90 108,042/90-91
1780	**STROINK, GERHARD** ***Physics, Dalhousie*** **GARDNER, MARTIN J.** ***Medicine, Dalhousie*** High resolution magnetocardiographic and body surface potential mapping and analysis *1990-91 expenditure breakdown: research support, $50,525; equipment, $22,397* **1990-91 EP Jul 90–Ma: 91** *MA-10972*	$ 72,922/90-91
1781	**STUTTARD, COLIN** ***Microbiology, Dalhousie*** Transduction in Streptomyces *MA-6037*	$ 410,723/77-89 47,277/89-90 33,209/90-91
1782	**SUH, MARTHA H.J.** ***Médecine, Montréal*** Identification and characterization of transcripts regulated during normal embryonic development and oncogenic transformation *MA-10363*	$ 60,000/88-89 60,000/89-90 48,750/90-91
1783	**SULLIVAN, ARTHUR K.** ***Medicine, McGill*** Molecular structure and pathology of myeloid cell granules *MA-10364*	$ 61,423/88-89 61,423/89-90 42,995/90-91
1784	**SUN, ANTHONY M.** ***Physiology, Toronto*** Bioartificial organs: pancreas, liver, parathyroid and pituitary **1990-91 EP Apr 90–Mar 91** *MA-8596*	$ 336,068/84-89 79,698/89-90 77,500/90-91
1785	**SUN, YING** ***Pharmacy, Memorial University of Newfoundland*** Non-invasive transdermal delivery of protein/peptide drugs (insulin) by iontophoresis and phonophoresis **1990-91 EP Apr 90–Mar 91** *MA-10682*	$ 56,838/89-90 46,250/90-91
1786	**SURANYI-CADOTTE, BARBARA E.** **WELNER, SHARON A.** ***Psychiatry, McGill*** Interaction between antidepressants and anxiolytics: basic and clinical studies *MA-9571*	$ 104,160/85-89 38,880/89-90 19,926/90-91
1787	**SUTHERLAND, ROBERT J.** ***Psychology, Lethbridge*** Animal models of amnesia *MA-9226*	$ 84,199/85-89 26,265/89-90 18,449/90-91
1788	**SUTTON, ROGER A.L.** ***Medicine, British Columbia*** Clinical research in mineral metabolism; studies in mineral metabolism in experimental animals **1990-91 EP Apr 90–Mar 91** *MT-5279*	$ 1,025,899/74-89 110,000/89-90 110,000/90-91
1789	**SWINDALE, NICHOLAS V.** ***Ophthalmology, British Columbia*** Organization of visual cortex and amblyopia *1990-91 expenditure breakdown: research support, $36,573; equipment, $1,500* **1990-91 EP Apr 90–Mar 91** *MT-9211*	$ 105,084/85-89 31,518/89-90 38,073/90-91
1790	**SYGUSCH, JURGEN** ***Biochimie, Sherbrooke*** Biochimie structurelle des aldolases: architecture moléculaire, structure et fonction, biogenèse oligomerique **1990-91 EP avr 90–mar 91** *MT-8088*	$ 392,075/83-89 93,300/89-90 93,300/90-91
1791	**SZAREK, WALTER A.** ***Chemistry, Queen's*** **DEPEW, WILLIAM T.** ***Medicine, Queen's*** **HAY, GEORGE W.** ***Chemistry, Queen's*** Oligomeric carbohydrates in parenteral nutrition **1990-91 EP Apr 90–Jun 90** *MA-10417*	$ 40,000/88-89 40,000/89-90 10,000/90-91
1792	**SZECHTMAN, HENRY** ***Biomedical Sciences, McMaster*** Dopamine, movements, motion, and behaviour: effect of chronic D2 stimulation *1990-91 expenditure breakdown: research support, $40,483; equipment, $47,065* **1990-91 EP Apr 90–Mar 91** *MT-8905*	$ 151,593/84-89 35,172/89-90 87,548/90-91
1793	**SZERB, JOHN C.** ***Physiology and Biophysics, Dalhousie*** Glutamate release and postsynaptic responses in the central nervous system **1990-91 EP Apr 90–Mar 91** *MT-0740*	$ 745,082/58-89 61,339/89-90 61,934/90-91
1794	**TAKEI, FUMIO** ***Pathology, British Columbia*** Structure and function of lymphocyte surface antigen **1990-91 EP Apr 90–Mar 91** *MA-7429*	$ 436,102/80-89 87,574/89-90 95,091/90-91
1795	**TAKEI, FUMIO** ***Pathology, British Columbia*** Growth and differentiation of immature thymocytes **1990-91 EP Apr 90–Mar 91** *MT-10365*	$ 70,996/88-89 68,696/89-90 83,333/90-91
1796	**TAKETO-HOSOTANI, TERUKO** ***Surgery, McGill*** Gonadal sex differentiation in mammals **1990-91 EP Apr 90–Mar 91** *MA-9740*	$ 167,437/86-89 56,880/89-90 56,880/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1797	**TAKETO-HOSOTANI, TERUKO** *Surgery, McGill* The mechanism of infertility of the B6.YDOM sex-reversed female mouse **1990-91 EP Apr 90–Mar 91** *MA-10684*	$ 46,141/89-90 60,000/90-91
1798	**TALAJIC, MARIO** *Médecine, Montréal* **NATTEL, STANLEY** *Pharmacology and Therapeutics, McGill* Model of atrioventricular node conduction *1990-91 ventilation des dépenses: aide à la recherche, $29,715; appareils, $6,626* **1990-91 EP jlt 90–mar 91** *MA-10872*	$ 36,341/90-91
1799	**TALBOT, PIERRE** *Institut Armand-Frappier (Laval-des-Rapides)* Implication des coronavirus dans des maladies neurologiques: étude moléculaire et immunobiologique *1990-91 ventilation des dépenses: aide à la recherche, $68,925; appareils, $13,283* **1990-91 EP avr 90–mar 91** *MT-9203*	$ 255,140/85-89 60,000/89-90 82,208/90-91
1800	**TAM, YUN K.** *Pharmacy and Pharmaceutical Sciences, Alberta* **KOO, WINSTON W.K.** *Pediatrics, Alberta* **COUTTS, RONALD T.** *Pharmacy and Pharmaceutical Sciences, Alberta* **GRAY, MURRAY R.** *Chemical Engineering, Alberta* Parenteral nutrient and drug interaction **1990-91 EP Apr 90–Mar 91** *MA-10685*	$ 41,250/89-90 55,000/90-91
1801	**TAM, YUN K.** *Pharmacy and Pharmaceutical Sciences, Alberta* **GRAY, MURRAY R.** *Chemical Engineering, Alberta* **COUTTS, RONALD T.** *Pharmacy and Pharmaceutical Sciences, Alberta* Enzyme inactivation and pharmacokinetic interactions *1990-91 expenditure breakdown: research support, $26,304; equipment, $6,240* **1990-91 EP Jul 90–Mar 91** *MT-10908*	$ 32,544/90-91
1802	**TAMAOKI, TAIKI** *Medical Biochemistry, Calgary* Regulation of protein synthesis in mammalian cells: factors involved in human alpha-fetoprotein gene expression **1990-91 EP Apr 90–Mar 91** *MT-1953*	$ 765,466/65-89 73,017/89-90 69,432/90-91

N° de liste	Subvention/Bourse	Résumé financier
1803	**TAN, LIAT** *Biochimie, Sherbrooke* **HOLLAND, HERBERT L.** *Chemistry, Brock* Etudes chimiques et biochimiques sur les enzymes cytochromes P-450 stéroidiques *MA-6679*	$ 418,561/79-89 58,220/89-90 47,304/90-91
1804	**TANGUAY, ROBERT M.** *Médecine, Laval* Cellular and molecular analysis of the heat shock response **1990-91 EP jlt 90–mar 91** *MT-11086*	$ 67,500/90-91
1805	**TANGUAY, ROBERT M.** *Médecine, Laval* Molecular biology of hereditary tyrosinemia (type 1) *1990-91 ventilation des dépenses: aide à la recherche, $58,875; appareils, $2,400* **1990-91 EP jlt 90–mar 91** *MA-11081*	$ 61,275/90-91
1806	**TANNENBAUM, GLORIA S.** *Pediatrics, McGill* Neuroendocrine mechanisms governing the rhythmic secretion of growth hormone **1990-91 EP Apr 90–Mar 91** *MT-6837*	$ 362,518/81-89 62,556/89-90 65,048/90-91
1807	**TANNOCK, IAN F.** *Medicine, Toronto* Biology and therapy of poorly nourished tumor cells **1990-91 EP Apr 90–Mar 91** *MT-9815*	$ 140,400/87-89 69,937/89-90 80,186/90-91
1808	**TANPHAICHITR, NONGNUJ** *Obstetrics and Gynecology, Ottawa* Fate and role of SLIP 1, a sulfogalactosylglycerolipid binding protein, on sperm-egg interaction **1990-91 EP Apr 90–Mar 91** *MA-10366*	$ 35,000/88-89 35,000/89-90 41,078/90-91
1809	**TANSWELL, A. KEITH** *Pediatrics, Toronto* Cellular interactions and developmental aspects of neonatal pulmonary oxygen toxicity **1990-91 EP Apr 90–Mar 91** *MT-7867*	$ 346,878/82-89 65,137/89-90 65,770/90-91
1810	**TASKER, RICHARD A.R.** *Atlantic Veterinary College, Prince Edward Island* Alpha adrenergic mechanisms of analgesia in the formalin test **1990-91 EP Apr 90–Mar 91** *MT-10686*	$ 40,390/89-90 38,500/90-91
1811	**TATOR, CHARLES H.** *Surgery, Toronto* Repair of traumatic injuries of the spinal cord **1990-91 EP Apr 90–Mar 91** *MT-4046*	$ 487,501/70-89 120,223/89-90 78,029/90-91

List No.	Grant/Award	Financial History
1812	**TATTON, WILLIAM G.** *Physiology, Toronto* Degeneration and regeneration of aging monoaminergic neurons **1990-91 EP Apr 90–Mar 91** *MA-5218*	$ 942,536/74-89 86,452/89-90 78,380/90-91
1813	**TAWASHI, RASHAD K.** *Pharmacie, Montréal* Experimental induction of crystalluria **1990-91 EP avr 90–mar 91** *MA-9140*	$ 151,825/85-89 39,432/89-90 39,656/90-91
1814	**TAYLOR, DIANE E.** *Medical Microbiology and Infectious Diseases, Alberta* Genetic and physical characterization of antibiotic resistance plasmids of the H incompatibility group *1990-91 expenditure breakdown: research support, $64,202; equipment, $3,180* **1990-91 EP Apr 90–Mar 91** *MT-6200*	$ 443,797/77-89 52,530/89-90 67,382/90-91
1815	**TEH, HUNG-SIA** *Microbiology, British Columbia* T cell development in T cell receptor transgenic mice *1990-91 expenditure breakdown: research support, $126,740; equipment, $3,000* **1990-91 EP Apr 90–Mar 91** *MT-7123*	$ 785,108/79-89 115,000/89-90 129,740/90-91
1816	**TEMPLETON, DOUGLAS M.** *Clinical Biochemistry, Toronto* Mechanisms of metal toxicity in the renal glomerulus **1990-91 EP Apr 90–Mar 91** *MT-9360*	$ 173,562/85-89 49,378/89-90 51,184/90-91
1817	**TEMPLETON, JOHN F.** *Pharmacy, Manitoba* Modified steroid hormones **1990-91 EP Apr 90–Mar 91** *MA-5663*	$ 244,478/75-89 32,406/89-90 32,984/90-91
1818	**TEMPLETON, JOHN F.** *Pharmacy, Manitoba* Cardiotonic steroids **1990-91 EP Apr 90–Mar 91** *MA-10687*	$ 31,500/89-90 42,000/90-91
1819	**TENENBAUM, HOWARD C.** **MCCULLOCH, CHRISTOPHER A.G.** **LIMEBACK, HARDY F.** *Dentistry, Toronto* Regulation of bone cell differentiation **1990-91 EP Apr 90–Mar 91** *MA-9870*	$ 84,390/87-89 69,858/89-90 86,499/90-91
1820	**TENENBAUM, HOWARD C.** *Dentistry, Toronto* A study of osteogenesis *MA-9312*	$ 171,139/85-89 58,834/89-90 30,295/90-91
1821	**TENER, GORDON M.** *Biochemistry, British Columbia* Studies on nucleic acids **1990-91 EP Apr 90–Mar 91** *MA-10688*	$ 54,000/89-90 72,000/90-91
1822	**TENNISWOOD, MARTIN P.R.** *Biochemistry, Ottawa* Androgen-repressed gene expression in the rat ventral prostate **1990-91 EP Apr 90–Mar 91** *MA-8323*	$ 269,044/83-89 65,000/89-90 65,000/90-91
1823	**TENNISWOOD, MARTIN P.R.** *Biochemistry, Ottawa* **GEOFFRION, YVES H.** *Biological Sciences, National Research Council of Canada (Ottawa)* Importance of continuous high blood alcohol in the pathogenesis of alcoholic liver disease **1990-91 EP Apr 90–Mar 91** *MA-8608*	$ 316,634/84-89 3,144/89-90 73,855/90-91
1824	**TENNISWOOD, MARTIN P.R.** *Biochemistry, Ottawa* Intermediate filaments and the Mallory body **1990-91 EP Apr 90–Mar 91** *MA-8606*	$ 362,840/84-89 107,783/89-90 112,315/90-91
1825	**TEPPERMAN, BARRY L.** *Physiology, Western Ontario* Physiological mechanisms in the control and development of gastric mucosal defense **1990-91 EP Apr 90–Mar 91** *MT-6426*	$ 430,768/78-89 79,080/89-90 79,080/90-91
1826	**TETZLAFF, WOLFRAM G.** *Anatomy, Calgary* Gene expression in lesioned neurons of the peripheral nervous system and the central nervous system **1990-91 EP Apr 90–Mar 91** *MT-10689*	$ 126,684/89-90 56,100/90-91
1827	**THIESSEN, JAKE J.** *Pharmacy, Toronto* The pharmacokinetics of deacetylation *MA-10367*	$ 48,383/88-89 43,093/89-90 35,013/90-91
1828	**THOMPSON, DAVID M.** *Medicine, British Columbia* Phosphatidylinositol cycle in growth factor action *MA-9622*	$ 120,908/85-89 38,544/89-90 19,754/90-91
1829	**THOMSON, ALAN B.R.** *Medicine, Alberta* Intestinal absorption in health and disease **1990-91 EP Apr 90–Mar 91** *MT-6039*	$ 612,554/77-89 105,002/89-90 121,227/90-91
1830	**THOMSON, ALAN B.R.** *Medicine, Alberta* Reflex adjustments associated with pulmonary congestion **1990-91 EP Apr 90–Mar 91** *MA-7083*	$ 369,281/79-89 109,544/89-90 3[illegible]/90-91
1831	**THOMSON, DAVID M.P.** *Medicine, McGill* **STANNERS, CLIFFORD P.** *Biochemistry, McGill* Molecular characterization of human organ-specific colon cancer neoantigens **1990-91 EP Apr 90–Mar 91** *MA-9560*	$ 187,251/85-89 68,000/89-90 68,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1832	**THOMSON, IAN R.** *Anesthesia, Manitoba* **MORRIS, ANDREW L.** *Medicine, Manitoba* Sufentanil anesthesia: drug interactions with premedication and muscle relaxants **1990-91 EP Apr 90–Jun 90** *MA-10329*	$ 53,570/88-89 53,570/89-90 13,392/90-91
1833	**THORNHILL, JAMES A.** *Physiology, Saskatchewan* Central nervous system activation of brown adipose tissue thermogenesis *1990-91 expenditure breakdown: research support, $38,060; equipment, $7,321* **1990-91 EP Apr 90–Mar 91** *MT-10277*	$ 45,960/88-89 35,295/89-90 45,381/90-91
1834	**THURLBECK, WILLIAM M.** *Pathology, British Columbia* Studies in lung growth **1990-91 EP Apr 90–Mar 91** *MT-7124*	$ 1,149,009/79-89 143,114/89-90 138,000/90-91
1835	**TILCOCK, COLIN P.S.** *Biochemistry, British Columbia* Liposomal contrast agents for magnetic resonance imaging **1990-91 EP Apr 90–Mar 91** *MA-10690*	$ 38,827/89-90 40,540/90-91
1836	**TINGLE, AUBREY J.** *Pediatrics, British Columbia* **MITCHELL, LESLIE A.** *Pathology, British Columbia* Pathogenesis of rubella-associated arthritis *1990-91 expenditure breakdown: research support, $94,519; equipment, $17,200* **1990-91 EP Apr 90–Mar 91** *MT-7351*	$ 434,363/80-89 84,048/89-90 111,719/90-91
1837	**TOMLINSON, R. DAVID** *Otolaryngology, Toronto* Normal and pathological eye-head coordination *1990-91 expenditure breakdown: research support, $77,902; equipment, $13,518* **1990-91 EP Apr 90–Mar 91** *MT-7792*	$ 349,547/82-89 61,145/89-90 91,420/90-91
1838	**TONZETICH, JOSEPH** *Dentistry, British Columbia* Immunologic and metabolic analyses of markers of active periodontal disease *MA-3589*	$ 753,353/69-89 75,967/89-90 38,933/90-91
1839	**TRACEY, ALAN S.** *Chemistry, Simon Fraser* The biochemistry of transition metal phosphate analogues *MA-9470*	$ 138,894/85-89 40,973/89-90 18,026/90-91
1840	**TRAHAN, LUC** *Médecine dentaire, Laval* Streptococcus mutans xylitol-resistant phenotype: its nature, selection process, ecology and role in dental caries *MA-8727*	$ 204,691/84-89 56,420/89-90 24,684/90-91
1841	**TRASLER, DAPHNE G.** *Biology, McGill* Gene-teratogen interaction and embryonic mechanisms in mouse neural tube defects **1990-91 EP Apr 90–Mar 91** *MT-5836*	$ 494,518/76-89 56,999/89-90 55,973/90-91
1842	**TREHUB, SANDRA E.** **SCHNEIDER, BRUCE A.** *Psychology, Toronto* Auditory sensitivity in infants and children **1990-91 EP Apr 90–Mar 91** *MT-6239*	$ 366,935/77-89 35,720/89-90 44,225/90-91
1843	**TREMBLAY, JACQUES P.** *Anatomie, Laval* Mechanisms of synaptic transmission *1990-91 ventilation des dépenses: aide à la recherche, $62,051; appareils, $5,086* **1990-91 EP avr 90–mar 91** *MT-5977*	$ 470,716/77-89 58,151/89-90 67,137/90-91
1844	**TREMBLAY, JACQUES P.** *Anatomie, Laval* **BOUCHARD, JEAN-PIERRE** *Médecine, Laval* **ROY, RAYNALD** *Médecine, Laval* Gene complementation: formation of hybrid myotubes **1990-91 EP jlt 90–mar 91** *MT-10827*	$ 60,033/90-91
1845	**TREMBLAY, JOHANNE** *Médecine, Montréal* Study of molecular mechanisms of guanylate cyclase activation by its agonists *MA-9299*	$ 155,586/85-89 44,125/89-90 19,412/90-91
1846	**TREMBLAY, JOHANNE** **KUPRANYCZ, DONNA B.** *Médecine, Montréal* A lipid activator of calmodulin in hypertension **1990-91 EP avr 90–mar 91** *MA-10691*	$ 35,250/89-90 47,000/90-91
1847	**TREMBLAY, ROLAND R.** **DUBE, JEAN Y.** *Médecine, Laval* Biochimie et endocrinologie des kallikréines prostatiques **1990-91 EP avr 90–mar 91** *MT-4780*	$ 1,021,428/72-89 108,915/89-90 109,927/90-91
1848	**TREVITHICK, JOHN R.** *Biochemistry, Western Ontario* **INCH, W. RODGER** *Oncology, Western Ontario* **SANFORD, S. ERNEST** *Ontario Ministry of Agriculture and Food (London)* Antioxidants and cataract formation **1990-91 EP Apr 90–Mar 91** *MA-10692*	$ 44,688/89-90 59,584/90-91

List No.	Grant/Award	Financial History
1849	**TRIFARO, JOSE M.** *Pharmacology, Ottawa* Cellular and molecular mechanisms in secretion **1990-91 EP Jul 90–Mar 91** *MA-11169*	$ 103,655/90-91
1850	**TRIGGLE, CHRISTOPHER R.** *Pharmacology and Therapeutics, Calgary* Studies of the modes and sites of action of Ca2+ channel antagonists **1990-91 EP Apr 90–Mar 91** *MT-6838*	$ 265,052/81-89 44,782/89-90 44,782/90-91
1851	**TROPE, GRAHAM E.** *Ophthalmology, Toronto* **BASU, PRASANTA K.** *Ophthalmology, Toronto* **MENON, I. ARAVINDAKSHAN** *Medicine, Toronto* **ROOTMAN, DAVID S.** *Ophthalmology, Toronto* **BUNTING, PETER S.** *Clinical Biochemistry, Toronto* **HEATHCOTE, J. GODFREY** *Pathology, Toronto* Ocular drug delivery system after glaucoma surgery **1990-91 EP Jul 90–Mar 91** *MA-11049*	$ 41,741/90-91
1852	**TRUDEL, MARIE** *Médecine, Montréal* Study of human globin gene regulation in transgenic mice *1990-91 ventilation des dépenses: aide à la recherche de juillet 1989 à octobre 1989, $23,925; et d'avril 1990 à mars 1991, $71,774* *MT-10693*	$ 52,331/89-90 95,699/90-91
1853	**TRUDEL, MICHEL** *Institut Armand-Frappier (Laval-des-Rapides)* Recherche et développement de vaccins viraux sous-unitaires ou synthétiques: étude des déterminants antigéniques des virus respiratoires syncytial et rubéole **1990-91 EP avr 90–mar 91** *MA-6682*	$ 439,963/79-89 64,000/89-90 64,000/90-91
1854	**TRUST, TREVOR J.** *Biochemistry and Microbiology, Victoria* Pathogenetic campylobacters: vaccine development and molecular analysis of phase variation **1990-91 EP Apr 90–Mar 91** *MT-7946*	$ 210,064/83-89 57,783/89-90 84,453/90-91
1855	**TSANG, BENJAMIN K.** *Obstetrics and Gynecology, Ottawa* Regulation of ovarian function **1990-91 EP Apr 90–Mar 91** *MT-10369*	$ 57,000/88-89 57,000/89-90 88,656/90-91
1856	**TSANG, S. SING** *Medical Genetics, British Columbia* Enhancement of papillomavirus DNA-induced cell transformation by a tumour promoter, mezerein: molecular mechanism **1990-91 EP Apr 90–Mar 91** *MT-10694*	$ 44,851/89-90 55,134/90-91
1857	**TSUI, FLORENCE W.L.** *Immunology, Toronto* Molecular studies on mammalian aminoacyl-tRNA synthetases *1990-91 expenditure breakdown: research support, $71,745; equipment, $5,000* **1990-91 EP Apr 90–Mar 91** *MT-10370*	$ 80,488/88-89 70,350/89-90 76,745/90-91
1858	**TUANA, BALWANT S.** *Pharmacology, Ottawa* Molecular aspects of the calcium antagonist receptor from skeletal muscle *1990-91 expenditure breakdown: research support, $44,272; equipment, $1,500* **1990-91 EP Apr 90–Mar 91** *MT-9596*	$ 137,870/85-89 43,160/89-90 45,772/90-91
1859	**TUFARO, FRANCIS** *Microbiology, British Columbia* Studies on the virus-host interaction in mammalian cells *MA-10330*	$ 70,554/88-89 52,000/89-90 26,650/90-91
1860	**TURCOTTE, RAYMOND** *Institut Armand-Frappier (Laval-des-Rapides)* Mécanismes impliqués dans l'immunodéficience *MA-8748*	$ 216,663/84-89 48,728/89-90 24,973/90-91
1861	**TURLEY, EVA A.** *Pediatrics and Child Health, Manitoba* The regulation of smooth muscle cell motility by hyaluronan and its binding site **1990-91 EP Jul 90–Mar 91** *MA-10948*	$ 30,563/90-91
1862	**TURLEY, EVA A.** *Pediatrics and Child Health, Manitoba* Hyaluronate receptor **1990-91 EP Apr 90–Mar 91** *MT-9469*	$ 198,586/85-89 60,000/89-90 60,000/90-91
1863	**TURNBULL, GEOFFREY K.** *Medicine, Dalhousie* **RITVO, PAUL G.** *Psychiatry, Dalhousie* Biofeedback relaxation therapy in obstructed constipation *MA-10371*	$ 24,000/88-89 24,000/89-90 10,500/90-91
1864	**TUSTANOFF, EUGENE R.** *Biochemistry, Western Ontario* Studies on the control mechanisms in yeast mitochondrial biogenesis **1990-91 EP Apr 90–Mar 91** *MA-10695*	$ 42,500/89-90 50,000/90-91
1865	**TYBERG, JOHN V.** *Medicine, Calgary* Venous hemodynamics: is venous return equivalent to cardiac output? **1990-91 EP Apr 90–Mar 91** *MT-10696*	$ 26,250/89-90 35,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1866	**TYRRELL, DAVID L.J.** ***Medical Microbiology and Infectious Diseases, Alberta*** Antiviral therapy for hepatitis B **1990-91 EP Apr 90–Mar 91** *MT-10697*	$ 54,000/89-90 72,000/90-91
1867	**TZE, WAH JUN** ***Pediatrics, British Columbia*** **TAI, JOSEPH Y.C.** ***Pathology, British Columbia*** Allo- and xeno-transplantation studies with purified pancreatic endocrine cells **1990-91 EP Apr 90–Mar 91** *MT-5552*	$ 671,115/74-89 68,982/89-90 70,556/90-91
1868	**UETRECHT, JACK P.** ***Pharmacy, Toronto*** Reactive metabolites as the cause of drug-induced lupus **1990-91 EP Apr 90–Mar 91** *MA-9336*	$ 155,415/85-89 52,518/89-90 58,647/90-91
1869	**UETRECHT, JACK P.** ***Pharmacy, Toronto*** Oxidation of drugs to reactive metabolites by leukocytes **1990-91 EP Apr 90–Mar 91** *MA-10036*	$ 77,787/87-89 45,928/89-90 48,020/90-91
1870	**UHTHOFF, HANS K.** ***Surgery, Ottawa*** **BLACK, ROBIN C.** ***National Research Council of Canada (Ottawa)*** **FINNEGAN, MAUREEN A.** ***Surgery, Ottawa*** Effect of axial plate rigidity on fracture healing and remodeling **1990-91 EP Apr 90–Mar 91** *MA-10037*	$ 141,898/87-89 85,710/89-90 87,251/90-91
1871	**UITTO, V. VELI-JUKKA** ***Dentistry, British Columbia*** Effect of B. gingivalis and T. denticola proteases on epithelial cell behaviour **1990-91 EP Apr 90–Mar 91** *MA-10460*	$ 42,112/89-90 54,948/90-91
1872	**UNDERDOWN, BRIAN J.** ***Pathology, McMaster*** Study of the IgA response and mucosal immunity **1990-91 EP Apr 90–Mar 91** *MT-4050*	$ 1,016,618/70-89 77,391/89-90 77,391/90-91
1873	**VADEBONCOEUR, CHRISTIAN** ***Biochimie, Laval*** Protein components of the phosphoenolpyruvate:glycose phosphotransferase system of oral streptococci and their role in the control of sugar utilization **1990-91 EP avr 90–mar 91** *MT-6979*	$ 409,936/81-89 93,735/89-90 107,870/90-91
1874	**VALVANO, MIGUEL A.** ***Microbiology and Immunology, Western Ontario*** Design of an O-polysaccharide-protein conjugated vaccine against E. coli extraintestinal infections **1990-91 EP Apr 90–Mar 91** *MA-10698*	$ 39,280/89-90 45,381/90-91
1875	**VALVANO, MIGUEL A.** ***Microbiology and Immunology, Western Ontario*** Molecular genetics of the O-side chain lipopolysaccharide genes in E. coli *1990-91 expenditure breakdown: research support, $59,081; equipment, $5,930* **1990-91 EP Apr 90–Mar 91** *MT-10206*	$ 51,700/88-89 47,152/89-90 65,011/90-91
1876	**VAN AERDE, JOHNY E.** ***Pediatrics, Alberta*** Fat utilization in parenterally fed neonates **1990-91 EP Apr 90–Mar 91** *MT-10418*	$ 60,000/88-89 60,000/89-90 67,875/90-91
1877	**VAN DE SANDE, JOHAN H.** ***Medical Biochemistry, Calgary*** Polynucleotide conformation and DNA repair *1990-91 expenditure breakdown: research support, $100,136; equipment, $8,000* **1990-91 EP Apr 90–Mar 91** *MT-4885*	$ 989,865/72-89 99,807/89-90 108,136/90-91
1878	**VAN DE WERVE, GERALD** ***Nutrition, Montréal*** Hormonal regulation of hepatic carbohydrate metabolism in health and disease *1990-91 ventilation des dépenses: aide à la recherche, $51,316; appareils, $5,794* **1990-91 EP jlt 90–mar 91** *MT-10804*	$ 57,110/90-91
1879	**VAN DER KOOY, DEREK J.** ***Anatomy, Toronto*** Pattern formation in the developing mammalian nervous system **1990-91 EP Apr 90–Mar 91** *MT-7950*	$ 300,857/83-89 112,404/89-90 92,243/90-91
1880	**VAN DER KOOY, DEREK J.** ***Anatomy, Toronto*** Neurobiology of the motivational effects of opiates **1990-91 EP Apr 90–Mar 91** *MT-6980*	$ 235,757/81-89 36,687/89-90 37,043/90-91
1881	**VAN DER KOOY, DEREK J.** ***Anatomy, Toronto*** Intracellular motility mechanisms **1990-91 EP Apr 90–Mar 91** *MA-9989*	$ 146,258/87-89 80,850/89-90 81,141/90-91
1882	**VAN DER REST, MICHEL** ***Surgery, McGill*** Structural study of the minor collagen types **1990-91 EP Apr 90–Jun 90** *MT-7796*	$ 290,573/82-89 47,277/89-90 11,934/90-91

List No.	Grant/Award	Financial History
1883	**VAN TOL, HUBERT H.M.** *Pharmacology, Toronto* Cloning and gene regulation of dopamine receptors **1990-91 EP Jul 90–Sep 90** *MT-10852*	$ 12,500/90-91
1884	**VAN VUGT, DEAN A.** *Obstetrics and Gynecology, Queen's* Hypothalamic regulation of the menstrual cycle **1990-91 EP Apr 90–Mar 91** *MA-9785*	$ 99,572/87-89 67,356/89-90 62,635/90-91
1885	**VANCE, DENNIS E.** *Biochemistry, Alberta* Regulation of phosphatidylcholine metabolism **1990-91 EP Apr 90–Mar 91** *MT-5182*	$ 1,204,266/73-89 172,937/89-90 189,349/90-91
1886	**VANCE, JEAN E.** *Medicine, Alberta* Intracellular transport of phospholipids **1990-91 EP Apr 90–Mar 91** *MT-10699*	$ 46,758/89-90 62,344/90-91
1887	**VANDERMEULEN, JOHN A.** *Pediatrics, McMaster* Phospholipase D: regulation and function *1990-91 expenditure breakdown: research support, $41,784; equipment, $31,203* **1990-91 EP Jul 90–Mar 91** *MA-10883*	$ 72,987/90-91
1888	**VARIN, FRANCE** *Pharmacie, Montréal* **VILLENEUVE, JEAN-PIERRE** *Médecine, Montréal* Biotransformation and pharmacodynamics of spironolactone in cirrhosis **1990-91 EP avr 90–mar 91** *MA-10700*	$ 41,813/89-90 39,751/90-91
1889	**VARMA, DAYA R.** *Pharmacology and Therapeutics, McGill* Mechanism of methyl isocyanate toxicity **1990-91 EP Apr 90–Mar 91** *MA-9726*	$ 138,222/86-89 52,565/89-90 52,565/90-91
1890	**VARMUZA, SUSANNAH L.** *Zoology, Toronto* Molecular genetic studies of mouse embryology **1990-91 EP Apr 90–Mar 91** *MT-10701*	$ 50,825/89-90 67,767/90-91
1891	**VASDEV, SUDESH C.** *Medicine, Memorial University of Newfoundland* **GAULT, MATHEW H.** *Medicine, Memorial University of Newfoundland* **PRABHAKARAN, VICTOR H.** *Pathology, Memorial University of Newfoundland* Endogenous Na,K-ATPase inhibitors and their role in hypertension *MA-9811*	$ 70,012/87-89 47,372/89-90 40,488/90-91
1892	**VEALE, WARREN L.** **COOPER, KEITH E.** *Medical Physiology, Calgary* Physiological mechanisms of thermoregulation, fever and antipyresis **1990-91 EP Apr 90–Mar 91** *MT-4340*	$ 1,384,105/71-89 145,560/89-90 145,560/90-91
1893	**VEILLETTE, ANDRE** *Medicine, McGill* Analysis of the lymphocyte-specific tyrosine kinase (p56lck) **1990-91 EP Apr 90–Mar 91** *MT-10702*	$ 73,750/89-90 65,000/90-91
1894	**VEKEMANS, MICHEL J.J.** *Pediatrics, McGill* Study of the survival of trisomic embryos/fetuses in the mouse **1990-91 EP Apr 90–Mar 91** *MA-9597*	$ 173,761/86-89 80,000/89-90 80,000/90-91
1895	**VIELKIND, JUERGEN R.** *Pathology, British Columbia* Fish melanoma and cell development **1990-91 EP Apr 90–Mar 91** *MT-8696*	$ 193,481/84-89 46,435/89-90 56,986/90-91
1896	**VIETH, REINHOLD** *Clinical Biochemistry, Toronto* A model for the economy of vitamin D *1990-91 expenditure breakdown: research support, $39,002; equipment, $1,300* **1990-91 EP Jul 90–Mar 91** *MA-10941*	$ 40,302/90-91
1897	**VILIS, TUTIS** *Physiology, Western Ontario* Eye movements in three dimensions: characteristics and mechanisms **1990-91 EP Apr 90–Mar 91** *MT-9335*	$ 228,608/85-89 79,845/89-90 79,845/90-91
1898	**VINAY, PATRICK** *Médecine, Montréal* **BOULANGER, YVAN** *Génie biomédical, Montréal* Physiology of Na,K-ATPase in situ along the nephron **1990-91 EP avr 90–mar 91** *MT-7875*	$ 607,115/82-89 101,908/89-90 102,898/90-91
1899	**VINCENT, STEVEN R.** *Psychiatry, British Columbia* Morphological and functional studies of striatal somatostatin neurons **1990-91 EP Apr 90–Mar 91** *MT-8038*	$ 290,954/83-89 62,913/89-90 62,913/90-91
1900	**VOGEL, HANS J.** *Biological Sciences, Calgary* Nuclear magnetic resonance studies of regulatory proteins **1990-91 EP Apr 90–Mar 91** *MA-9673*	$ 147,485/86-89 65,000/89-90 65,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1901	**VOGL, A. WAYNE** *Anatomy, British Columbia* Sertoli cell cytoskeleton in vivo **1990-91 EP Apr 90–Mar 91** *MT-8020*	$ 255,183/83-89 53,509/89-90 55,097/90-91
1902	**VOLPE, ROBERT** *Medicine, Toronto* Immunological aspects of thyroid disease **1990-91 EP Apr 90–Mar 91** *MT-0859*	$ 1,535,876/60-89 123,000/89-90 123,000/90-91
1903	**VRANIC, MLADEN** *Physiology, Toronto* Neuroendocrine control of glucoregulation in physiology and diabetes **1990-91 EP Apr 90–Mar 91** *MT-2197*	$ 1,082,631/66-89 132,356/89-90 131,117/90-91
1904	**WADA, JUHN A.** *Psychiatry, British Columbia* Neurobiology of epilepsy **1990-91 EP Apr 90–Mar 91** *MT-4988*	$ 1,010,244/73-89 78,266/89-90 79,025/90-91
1905	**WAINBERG, MARK A.** *Microbiology and Immunology, McGill* Studies on drug-resistant variants of HIV-1 **1990-91 EP Apr 90–Mar 91** *MT-9625*	$ 181,165/85-89 58,220/89-90 68,138/90-91
1906	**WAINWRIGHT, STANLEY D.** *Biochemistry, Dalhousie* Mechanism of a biological clock **1990-91 EP Apr 90–Mar 91** *MA-9090*	$ 442,932/81-89 71,000/89-90 71,000/90-91
1907	**WAISMAN, DAVID M.** *Medical Biochemistry, Calgary* Novel calcium-binding proteins **1990-91 EP Apr 90–Mar 91** *MT-9096*	$ 218,600/85-89 60,000/89-90 60,000/90-91
1908	**WALKER, IAN G.** *Biochemistry, Western Ontario* Repair of DNA by mammalian cells **1990-91 EP Apr 90–Mar 91** *MA-6422*	$ 207,796/85-89 50,788/89-90 50,788/90-91
1909	**WALKER, PAUL M.** *Surgery, Toronto* A study of reversible and irreversible ischemia in skeletal muscle: modification of damage in skeletal muscle by therapeutic interventions **1990-91 EP Apr 90–Mar 91** *MA-8076*	$ 226,718/83-89 60,299/89-90 62,801/90-91
1910	**WALKER, PETER** *Medicine, Ottawa* Thyroid hormone regulation of gene expression during maturation **1990-91 EP Apr 90–Mar 91** *MT-6204*	$ 358,630/81-89 77,000/89-90 77,000/90-91
1911	**WALL, JACK R.** **BERNARD, NICOLE F.** *Medicine, McGill* Pathogenesis of autoimmune thyroid disorders and Graves' ophthalmopathy *1990-91 expenditure breakdown: research support, $54,875; equipment, $9,187* **1990-91 EP Apr 90–Mar 91** *MT-6982*	$ 327,004/81-89 47,000/89-90 64,062/90-91
1912	**WALLACE, JOHN L.** *Medical Physiology, Calgary* Mechanisms of gastrointestinal damage, protection and repair **1990-91 EP Apr 90–Mar 91** *MA-9679*	$ 127,255/86-89 57,690/89-90 57,690/90-91
1913	**WALLEN, LINDA D.** *Pediatrics, Calgary* Fetal lung growth and development in oligohydramnios *MA-10419*	$ 40,550/88-89 40,550/89-90 28,385/90-91
1914	**WALLEY, KEITH R.** *Medicine, British Columbia* Left ventricular diastolic dysfunction in critical illness **1990-91 EP Jul 90–Mar 91** *MA-11005*	$ 34,646/90-91
1915	**WALSH, MICHAEL P.** *Medical Biochemistry, Calgary* Regulation of cellular functions by second messengers **1990-91 EP Apr 90–Mar 91** *MT-9097*	$ 216,750/85-89 65,000/89-90 65,000/90-91
1916	**WALZ, WOLFGANG** *Physiology, Saskatchewan* Brain ion homeostasis in health and disease *1990-91 expenditure breakdown: research support, $53,738; equipment, $24,784* **1990-91 EP Apr 90–Mar 91** *MT-8063*	$ 263,720/83-89 50,088/89-90 78,522/90-91
1917	**WANG, JERRY H.** *Medical Biochemistry, Calgary* Molecular mechanism of enzyme regulation **1990-91 EP Apr 90–Mar 91** *MT-2381*	$ 1,668,102/67-89 173,244/89-90 174,926/90-91
1918	**WANG, JERRY H.** *Medical Biochemistry, Calgary* Protein tyrosine kinase **1990-91 EP Apr 90–Mar 91** *MA-10059*	$ 87,500/87-89 50,502/89-90 50,804/90-91
1919	**WANG, LAWRENCE C.H.** *Zoology, Alberta* Mechanism and modulation of age-dependent decrease in cold tolerance **1990-91 EP Apr 90–Mar 91** *MA-9812*	$ 79,494/87-89 35,829/89-90 36,132/90-91
1920	**WANG, Y.-H. EUGENIA** *Anatomy, McGill* Programmed control of cell proliferation during aging **1990-91 EP Apr 90–Mar 91** *MA-10207*	$ 81,000/88-89 81,000/89-90 71,201/90-91

List No.	Grant/Award	Financial History
1921	**WARING, EDWARD M.** *Psychiatry, Western Ontario* **NEUFELD, R.W. JAMES** *Psychology, Western Ontario* The development and validation of the thought disorder questionnaire *MA-10263*	$ 28,946/88-89 7,236/89-90 7,599/90-91
1922	**WARNOCK, GARTH L.** *Surgery, Alberta* Transplantation of purified canine islets: comparison of single and multiple donor allografts and sites of implantation **1990-91 EP Apr 90–Mar 91** *MA-10733*	$ 60,000/89-90 80,000/90-91
1923	**WARSH, JERRY J.** *Psychiatry, Toronto* **COOKE, ROBERT G.** *Psychiatry, Toronto* **HASEY, GARY M.** *Psychiatry, Toronto* **GODSE, DAMODAR D.** *Clinical Biochemistry, Toronto* Lymphocyte adrenergic receptors in affective disorders **1990-91 EP Apr 90–Jun 90** *MA-9727*	$ 154,460/86-89 74,300/89-90 18,575/90-91
1924	**WARSHAWSKY, HERSHEY** *Anatomy, McGill* Cell biology of amelogenesis **1990-91 EP Apr 90–Mar 91** *MT-3552*	$ 1,016,617/69-89 116,866/89-90 118,000/90-91
1925	**WATERS, GLORIA S.** *Human Communication Disorders, McGill* Syntactic comprehension after brain damage; syntactic comprehension in aphasia **1990-91 EP Apr 90–Mar 91** *MA-9671*	$ 157,750/86-89 59,616/89-90 60,195/90-91
1926	**WATT, VALERIE M.** *Physiology, Toronto* Novel receptor tyrosine kinases *1990-91 expenditure breakdown: research support, $60,350; equipment, $5,497* **1990-91 EP Apr 90–Mar 91** *MT-8786*	$ 213,943/84-89 50,000/89-90 65,847/90-91
1927	**WATTERS, JAMES M.** *Surgery, Ottawa* Host determinants of the metabolic responses to surgery, trauma, and critical illness **1990-91 EP Apr 90–Mar 91** *MA-10060*	$ 92,300/87-89 67,570/89-90 78,140/90-91
1928	**WATTS, TANIA H.** *Immunology, Toronto* Supported planar membranes in studies of cell-cell recognition in the immune system **1990-91 EP Apr 90–Mar 91** *MA-10461*	$ 53,283/89-90 70,127/90-91
1929	**WAYGOOD, E. BRUCE** *Biochemistry, Saskatchewan* Structure-function studies on proteins and enzymes of the phosphoenolpyruvate:sugar phosphotransferase system **1990-91 EP Apr 90–Mar 91** *MT-6147*	$ 536,919/77-89 95,000/89-90 95,000/90-91
1930	**WEAVER, LYNNE C.** *Physiology, Western Ontario* Neural mechanisms for regional control of visceral blood flow **1990-91 EP Apr 90–Mar 91** *MT-10420*	$ 79,019/88-89 64,019/89-90 64,019/90-91
1931	**WEBBER, COLIN E.** *Radiology, McMaster* **ROBERTS, JACQUELINE G.** *Nursing, McMaster* **BLAKE, JENNIFER M.** *Obstetrics and Gynecology, Toronto* Bone mineral changes before, during and after menopause **1990-91 EP Apr 90–Mar 91** *MA-10331*	$ 45,000/88-89 45,000/89-90 47,265/90-91
1932	**WEBER, JOSEPH** *Microbiologie, Sherbrooke* Biologie moléculaire des adénovirus **1990-91 EP avr 90–mar 91** *MT-4164*	$ 1,012,380/70-89 105,811/89-90 98,196/90-91
1933	**WEEKS, GERALD** *Microbiology, British Columbia* Studies on the regulation of cellular differentiation **1990-91 EP Apr 90–Mar 91** *MA-9561*	$ 184,901/85-89 69,868/89-90 69,868/90-91
1934	**WEEKS, GERALD** *Microbiology, British Columbia* Control of oncogene expression **1990-91 EP Apr 90–Mar 91** *MT-8913*	$ 166,760/84-89 47,580/89-90 71,832/90-91
1935	**WEGMANN, THOMAS G.** *Immunology, Alberta* Antibody facilitation of bone marrow engraftment **1990-91 EP Apr 90–Mar 91** *MT-9876*	$ 169,750/87-89 99,910/89-90 101,985/90-91
1936	**WEINER, JOEL H.** *Biochemistry, Alberta* The signal transduction mechanism of beta-lactam antibiotic resistance in Gram-negative bacteria **1990-91 EP Jul 90–Mar 91** *MT-10860*	$ 48,750/90-91
1937	**WEINER, JOEL H.** *Biochemistry, Alberta* An investigation of membrane transport processes **1990-91 EP Apr 90–Mar 91** *MT-5838*	$ 733,046/76-89 91,717/89-90 92,608/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
1938	**WEIR, BRYCE K.A.** *Surgery, Alberta* Studies on the etiology of chronic cerebral vasospasm and delayed ischemia following subarachnoid hemorrhage in primates **1990-91 EP Apr 90–Mar 91** *MA-9158*	$ 193,001/85-89 45,433/89-90 43,850/90-91	1948	**WEST, NIGEL H.** *Physiology, Saskatchewan* Asphyxic defence mechanisms in vertebrates **1990-91 EP Apr 90–Mar 91** *MA-8326*	$ 209,132/84-89 49,291/89-90 49,291/90-91
1939	**WEISEL, RICHARD D.** *Surgery, Toronto* Alternative techniques of myocardial protection **1990-91 EP Apr 90–Mar 91** *MA-9829*	$ 131,972/87-89 67,189/89-90 67,591/90-91	1949	**WHERRETT, JOHN R.** *Medicine, Toronto* Chemical pathology of neurologic disease *1990-91 expenditure breakdown: research support, $68,473; equipment, $1,750* **1990-91 EP Apr 90–Mar 91** *MA-2235*	$ 781,598/66-89 65,321/89-90 70,223/90-91
1940	**WEISS, SAMUEL** *Pathology, Calgary* Excitatory amino acid receptor systems in striatal neurons **1990-91 EP Apr 90–Mar 91** *MT-10421*	$ 22,710/88-89 45,420/89-90 57,078/90-91	1950	**WHISHAW, IAN Q.** *Psychology, Lethbridge* Neural and behavioral changes following brain damage **1990-91 EP Apr 90–Mar 91** *MA-10422*	$ 20,000/88-89 15,500/89-90 24,350/90-91
1941	**WEITZ, JEFFREY I.** *Medicine, McMaster* Physiologic significance of plasminogen independent and dependent interactions between plasminogen activators (tissue plasminogen activator and urokinase) and fibrinogen **1990-91 EP Apr 90–Mar 91** *MA-9873*	$ 108,120/87-89 97,801/89-90 60,973/90-91	1951	**WHITE, NORMAN M.** *Psychology, McGill* Multiple memory systems in the brain: their function and interaction *MA-9590*	$ 62,080/85-89 19,000/89-90 13,300/90-91
1942	**WELLS, JAMES W.** *Pharmacy, Toronto* Characterization of muscarinic receptors **1990-91 EP Apr 90–Mar 91** *MT-7130*	$ 405,705/79-89 55,387/89-90 55,387/90-91	1952	**WHITE, THOMAS D.** *Pharmacology, Dalhousie* Characterization of the evoked release of ATP and adenosine from nerves **1990-91 EP Apr 90–Mar 91** *MT-4592*	$ 620,656/71-89 73,389/89-90 73,389/90-91
1943	**WELLS, JAMES W.** *Pharmacy, Toronto* Characterization of H2 histaminic receptors *MA-3057*	$ 753,447/68-89 65,137/89-90 33,541/90-91	1953	**WHITELAW, WILLIAM A.** *Medicine, Calgary* Control of intercostal muscles **1990-91 EP Apr 90–Mar 91** *MA-7358*	$ 390,514/80-89 65,222/89-90 65,855/90-91
1944	**WELLS, PETER G.** *Pharmacy, Toronto* **WILEY, MICHAEL J.** *Anatomy, Toronto* Drug teratogenesis in embryo culture **1990-91 EP Apr 90–Mar 91** *MA-8738*	$ 255,182/84-89 53,986/89-90 53,986/90-91	1954	**WHITFIELD, CHRISTOPHER** *Microbiology, Guelph* Genetics of capsular polysaccharide biosynthesis in Gram-negative bacteria **1990-91 EP Apr 90–Mar 91** *MA-9623*	$ 159,635/85-89 50,560/89-90 50,560/90-91
1945	**WELLS, PETER G.** *Pharmacy, Toronto* Toxicology of drugs bioactivated to a reactive intermediate **1990-91 EP Apr 90–Mar 91** *MA-9418*	$ 159,556/85-89 55,832/89-90 46,829/90-91	1955	**WIEBE, LEONARD I.** *Pharmacy and Pharmaceutical Sciences, Alberta* In vivo metabolism of fluoropyrimidine nucleosides using whole-body fluorine-19 nuclear magnetic resonance *MA-9684*	$ 130,186/86-89 49,387/89-90 34,571/90-91
1946	**WELSH, JOELLEN** *Biochemistry, Ottawa* Vitamin D metabolism in experimental diabetes *MA-10332*	$ 44,374/88-89 39,708/89-90 20,350/90-91	1956	**WIEBE, LEONARD I.** **KNAUS, EDWARD E.** *Pharmacy and Pharmaceutical Sciences, Alberta* Novel (radiolabelled) pyrimidine nucleosides for evaluation as diagnostic and (or) chemotherapeutic agents in oncology and virology **1990-91 EP Apr 90–Mar 91** *MA-5965*	$ 445,073/72-89 48,328/89-90 50,042/90-91
1947	**WENMAN, WANDA M.** **KAUL, RAVI** *Pediatrics, Alberta* Pathogenesis of human chlamydial infections **1990-91 EP Apr 90–Mar 91** *MA-7951*	$ 300,834/83-89 59,549/89-90 60,019/90-91			

List No.	Grant/Award	Financial History
1957	**WILDEMAN, ALAN G.** *Molecular Biology and Genetics, Guelph* Regulation of gene expression by mammalian tumor virus gene products **1990-91 EP Apr 90–Mar 91** *MA-9251*	$ 137,812/85-89 50,493/89-90 54,573/90-91
1958	**WILKINS, JOHN A.** *Medicine, Manitoba* Extracellular matrix induced lymphocyte activation: the regulation of responsiveness and the functional consequences of interaction **1990-91 EP Apr 90–Mar 91** *MA-10734*	$ 42,422/89-90 56,563/90-91
1959	**WILKINSON, MICHAEL** *Obstetrics and Gynecology, Dalhousie* Sexual maturation in the rat **1990-91 EP Apr 90–Mar 91** *MT-7131*	$ 337,950/79-89 54,525/89-90 54,131/90-91
1960	**WILLIAMS, BRYAN R.G.** *Pediatrics, Toronto* Genetic regulation of the interferon system **1990-91 EP Apr 90–Mar 91** *MT-6843*	$ 461,855/81-89 130,000/89-90 130,000/90-91
1961	**WILLIAMS, BRYAN R.G.** *Pediatrics, Toronto* **CAMPBELL, CHRISTINE E.** *Medical Genetics, Toronto* Analysis of TIMP (tissue inhibitor of metalloproteinases) gene expression in development **1990-91 EP Apr 90–Jun 90** *MT-9732*	$ 100,803/86-89 31,436/89-90 7,397/90-91
1962	**WILLIAMS, BRYAN R.G.** *Pediatrics, Toronto* Analysis of TIMP (tissue inhibitor of metalloproteinases) gene expression in development **1990-91 EP Jul 90–Mar 91** *MT-10949*	$ 72,743/90-91
1963	**WILLIAMS, C. NOEL** *Medicine, Dalhousie* Clostridium absonum (7-beta-hydroxysteroid dehydrogenase), bile acids and cholesterol gallstones **1990-91 EP Apr 90–Mar 91** *MA-5075*	$ 520,224/73-89 56,302/89-90 55,307/90-91
1964	**WILLIAMS, DAVID B.** **MORAN, LAURENCE A.** *Biochemistry, Toronto* Binding protein: a molecular chaperone in the endoplasmic reticulum **1990-91 EP Apr 90–Mar 91** *MT-10373*	$ 52,200/88-89 45,000/89-90 54,044/90-91
1965	**WILSON, GREGORY J.** *Pathology, Toronto* The use of porous surface structured surgical implants **1990-91 EP Apr 90–Mar 91** *MT-6449*	$ 784,425/83-89 157,879/89-90 154,396/90-91
1966	**WILSON, JOHN X.** *Physiology, Western Ontario* Physiological roles of peptides, catecholamines and redox agents in brain cells *MA-8621*	$ 204,327/84-89 46,000/89-90 23,575/90-91
1967	**WILSON, NADINE** *Physiology, British Columbia* Peptide hormones of electrolyte and water regulation **1990-91 EP Apr 90–Mar 91** *MA-8669*	$ 167,182/84-89 42,816/89-90 42,816/90-91
1968	**WINOCUR, GORDON** *Psychology, Trent* **MOSCOVITCH, MORRIS** *Psychology, Toronto* Neuropsychology of memory disorders in normal old people and in brain-damaged patients **1990-91 EP Apr 90–Mar 91** *MT-6694*	$ 171,637/84-89 40,700/89-90 40,700/90-91
1969	**WINTER, DAVID A.** *Kinesiology, Waterloo* **DEATHE, A. BARRY** *Physical Medicine and Rehabilitation, Western Ontario* Assessment of normal, degenerative and pathological gait *1990-91 expenditure breakdown: research support, $121,688; equipment, $27,660* **1990-91 EP Apr 90–Mar 91** *MT-4343*	$ 803,484/71-89 114,137/89-90 149,348/90-91
1970	**WISE, ROY A.** *Psychology, Concordia* Rat model of intravenous drug abuse **1990-91 EP Apr 90–Mar 91** *MT-6685*	$ 281,105/79-89 35,870/89-90 35,870/90-91
1971	**WITELSON, SANDRA F.** *Psychiatry, McMaster* Anatomical studies of human cortex in relation to functional asymmetry, sex and aging **1990-91 EP Apr 90–Mar 91** *MA-10610*	$ 29,175/89-90 38,900/90-91
1972	**WITTNICH, CARIN** *Surgery, Toronto* ATP precursors versus substrate enhancement in myocardial preconditioning of high risk hypertrophied hearts **1990-91 EP Apr 90–Mar 91** *MA-10062*	$ 70,000/87-89 43,000/89-90 44,000/90-91
1973	**WOLFE, BERNARD M.** *Medicine, Western Ontario* The regulation of hepatic lipoprotein metabolism, with particular reference to the mechanisms of action of gastrointestinal hormones and gonadal steroids in experimental animals and gonadal steroids in women with primary ovarian failure **1990-91 EP Apr 90–Mar 91** *MT-4248*	$ 693,424/70-89 70,000/89-90 70,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
1974	**WOLFE, DAVID A.** *Psychology, Western Ontario* The impact of child maltreatment **1990-91 EP Apr 90–Mar 91** *MT-10611*	$ 66,425/89-90 88,566/90-91
1975	**WOLFE, LEONHARD S.** *Neurology and Neurosurgery, McGill* Studies on inherited neurological diseases; studies on brain eicosanoids, function and metabolism **1990-91 EP Apr 90–Mar 91** *MT-1345*	$ 1,536,363/63-89 97,081/89-90 89,832/90-91
1976	**WOLLIN, ARMIN** *Physiology, Saskatchewan* Studies on the control of gastric secretion *MA-8622*	$ 227,779/84-89 42,000/89-90 18,375/90-91
1977	**WONG, JEFFREY T.** *Biochemistry, Toronto* Recognition mechanisms in protein synthesis **1990-91 EP Apr 90–Jun 90** *MT-2204*	$ 797,026/66-89 68,962/89-90 16,226/90-91
1978	**WONG, JEFFREY T.** *Biochemistry, Toronto* Amino acid and transfer RNA recognition by tryptophanyl-tRNA synthetase **1990-91 EP Jul 90–Mar 91** *MT-10925*	$ 52,500/90-91
1979	**WONG, KENNETH** *Medicine, Alberta* Regulation of calcium homeostasis in human neutrophils **1990-91 EP Apr 90–Mar 91** *MT-7360*	$ 314,613/80-89 48,817/89-90 48,526/90-91
1980	**WONG, NORMAN C.-W.** *Medicine, Calgary* Mechanisms of thyroid hormone action *1990-91 expenditure breakdown: research support, $41,250; equipment, $10,000* **1990-91 EP Jul 90–Mar 91** *MT-10840*	$ 51,250/90-91
1981	**WONG, NORMAN C.-W.** *Medicine, Calgary* Regulation of apolipoprotein A1 gene expression **1990-91 EP Jul 90–Mar 91** *MA-10986*	$ 31,796/90-91
1982	**WONG, NORMAN L.M.** **HU, DAVID C.K.** *Medicine, British Columbia* Modulation of atrial natriuretic peptide release and renal responsiveness **1990-91 EP Apr 90–Mar 91** *MA-10063*	$ 104,620/87-89 56,094/89-90 54,864/90-91
1983	**WOOD, JANET M.** *Chemistry and Biochemistry, Guelph* **GYLES, CARLTON L.** *Veterinary Microbiology and Immunology, Guelph* ProP: a determinant of uropathogenicity in Escherichia coli? **1990-91 EP Apr 90–Mar 91** *MA-10612*	$ 41,452/89-90 41,200/90-91
1984	**WOOD, STEPHEN** *Medical Genetics, British Columbia* Molecular genetics of human chromosome 8 **1990-91 EP Apr 90–Mar 91** *MT-10613*	$ 63,000/89-90 68,000/90-91
1985	**WOODS, DONALD E.** *Microbiology and Infectious Diseases, Calgary* Molecular pathogenesis of Pseudomonas toxins **1990-91 EP Apr 90–Mar 91** *MT-8117*	$ 257,504/83-89 53,581/89-90 55,762/90-91
1986	**WOODSIDE, BARBARA C.** *Psychology, Concordia* Factors mediating the effects of food restriction on the duration of lactational acyclicity in rats **1990-91 EP Apr 90–Mar 91** *MA-10158*	$ 48,800/88-89 40,800/89-90 40,200/90-91
1987	**WOROBEC, ELIZABETH A.** *Microbiology, Manitoba* The role of the protein export process in the virulence of the human pathogen Pseudomonas aeruginosa *1990-91 expenditure breakdown: research support, $37,990; equipment, $2,000* **1990-91 EP Apr 90–Mar 91** *MA-10181*	$ 47,560/88-89 35,860/89-90 39,990/90-91
1988	**WORTON, RONALD G.** **RAY, PETER N.** **THOMPSON, MARGARET W.** *Hospital for Sick Children (Toronto)* Cloning the gene for Duchenne muscular dystrophy **1990-91 EP Apr 90–Mar 91** *MA-8790*	$ 456,564/84-89 96,203/89-90 97,137/90-91
1989	**WRIGHT, JAMES R., JR.** *Pathology, Dalhousie* Evaluation of Brockmann bodies as a model for islet xenotransplantation *1990-91 expenditure breakdown: research support, $46,500; equipment, $1,500* **1990-91 EP Jul 90–Mar 91** *MA-10987*	$ 48,000/90-91
1990	**WRIGHT, JOANNE L.** *Pathology, British Columbia* An animal model of cigarette smoke induced pulmonary emphysema **1990-91 EP Apr 90–Mar 91** *MT-10604*	$ 31,153/89-90 41,537/90-91
1991	**WU, GILLIAN E.** *Immunology, Toronto* Molecular approaches to B cell differentiation **1990-91 EP Apr 90–Mar 91** *MA-10064*	$ 135,518/87-89 71,219/89-90 71,618/90-91

N° de liste	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
1992	**WU, TAI-WING** *Clinical Biochemistry, Toronto* A probable physiologic role of albumin-bound bilirubins **1990-91 EP Apr 90–Mar 91** *MA-10065*	$ 71,750/87-89 45,584/89-90 47,112/90-91
1993	**WYSS, URS P.** *Rehabilitation Therapy, Queen's* **OLNEY, SANDRA J.** *Rehabilitation Therapy, Queen's* **BRYANT, J. TIMOTHY** *Mechanical Engineering, Queen's* **COOKE, T. DEREK V.** *Surgery, Queen's* **ZEE, BENNY C.-Y.** *Community Health and Epidemiology, Queen's* Influence of dynamic mechanical factors on the genesis of osteoarthritis *MA-10374*	$ 50,000/88-89 43,700/89-90 30,590/90-91
1994	**YAFFE, MARTIN J.** *Radiology, Toronto* Computer-aided characterization of mammographic structures **1990-91 EP Jul 90–Mar 91** *MT-10843*	$ 41,512/90-91
1995	**YAFFE, MARTIN J.** *Radiology, Toronto* Digital mammographic imaging *1990-91 expenditure breakdown: research support, $55,250; equipment, $10,000* **1990-91 EP Apr 90–Mar 91** *MA-8540*	$ 220,635/84-89 55,999/89-90 65,250/90-91
1996	**YALE, JEAN-FRANCOIS** *Medicine, McGill* Immunological aspects of type I diabetes mellitus **1990-91 EP Apr 90–Mar 91** *MA-9275*	$ 155,939/85-89 50,352/89-90 49,316/90-91
1997	**YAMAGUCHI, NOBUHARU** *Pharmacie, Montréal* Mechanisms involved in adrenal catecholamine secretion during hyperinsulinemia **1990-91 EP avr 90–mar 91** *MT-10605*	$ 66,026/89-90 88,035/90-91
1998	**YAMAMOTO, Y. LUCAS** **DIKSIC, MIRKO** *Neurology and Neurosurgery, McGill* Cerebral ischemia **1990-91 EP Apr 90–Mar 91** *MT-3174*	$ 1,225,521/68-89 80,805/89-90 80,805/90-91
1999	**YANG, DANIEL S.-C.** *Biochemistry, McMaster* Structure and function of ice binding proteins *1990-91 expenditure breakdown: research support, $61,900; equipment, $8,000* **1990-91 EP Apr 90–Mar 91** *MA-10334*	$ 45,500/88-89 58,000/89-90 69,900/90-91
2000	**YATSCOFF, RANDALL W.** *Biochemistry and Molecular Biology, Manitoba* **THLIVERIS, JAMES A.** *Anatomy, Manitoba* **JEFFERY, JOHN R.** *Medicine, Manitoba* **HONCHARIK, NICHOLAS** *Pharmacy, Manitoba* Clinical significance of cyclosporine metabolites **1990-91 EP Apr 90–Mar 91** *MA-10606*	$ 23,238/89-90 30,984/90-91
2001	**YEN, EDWIN H.K.** *Dentistry, Manitoba* Characterization of cell populations isolated from cranial suture: collagen phenotypic expression **1990-91 EP Apr 90–Mar 91** *MT-7167*	$ 442,806/79-89 84,171/89-90 84,171/90-91
2002	**YEO, ERIK L.** *Medicine, Toronto* Activated platelet membranes in health and disease **1990-91 EP Apr 90–Mar 91** *MA-10736*	$ 42,431/89-90 48,575/90-91
2003	**YEUNG, MOIRA M.** **LAM, STEPHEN** *Medicine, British Columbia* Mechanism of asthma due to high and low molecular weight compounds **1990-91 EP Apr 90–Mar 91** *MT-10209*	$ 49,294/88-89 49,294/89-90 57,492/90-91
2004	**YEUNG, POLLEN K.F.** *Pharmacy, Dalhousie* **KLASSEN, GERALD A.** *Medicine, Dalhousie* Kinetic aspects of diltiazem metabolism *MA-10177*	$ 46,153/88-89 39,085/89-90 27,359/90-91
2005	**YIM, CONRAD C.-Y.** *Clinical Neurological Sciences, Western Ontario* Neuromodulatory action of dopamine **1990-91 EP Apr 90–Jun 90** *MA-10341*	$ 38,199/88-89 38,199/89-90 9,549/90-91
2006	**YIP, CECIL C.** *Banting and Best Department of Medical Research, Toronto* Structure and functions of the insulin receptor **1990-91 EP Apr 90–Mar 91** *MT-8947*	$ 419,981/84-89 141,000/89-90 141,000/90-91
2007	**YOKOYAMA, SHINJI** *Medicine, Alberta* Mechanism of non-polar lipid transfer reaction between lipoproteins **1990-91 EP Apr 90–Mar 91** *MT-10607*	$ 39,152/89-90 52,203/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2008	**YOON, JI-WON** ***Microbiology and Infectious Diseases, Calgary*** Autoimmune pathogenic mechanism and immunotherapy of insulin-dependent diabetes mellitus **1990-91 EP Apr 90–Mar 91** *MA-9584*	$ 212,500/83-89 70,000/89-90 70,000/90-91
2009	**YOON, JI-WON** ***Microbiology and Infectious Diseases, Calgary*** Role of viruses in the pathogenesis of insulin-dependent diabetes mellitus **1990-91 EP Apr 90–Mar 91** *MT-9786*	$ 96,225/87-89 56,795/89-90 59,604/90-91
2010	**YOUNES, MAGDY K.** ***Medicine, Manitoba*** Control of breathing in health and disease: exercise **1990-91 EP Apr 90–Mar 91** *MA-7954*	$ 203,882/83-89 64,920/89-90 77,973/90-91
2011	**YOUNG, IAIN D.** ***Pathology, Queen's*** Northern and in situ hybridization analysis of heparan sulfate proteoglycan, serum amyloid P and serum amyloid A 3 gene expression during murine AA amyloidogenesis *1990-91 expenditure breakdown: research support, $36,240; equipment, $8,345* **1990-91 EP Jul 90–Mar 91** *MA-11013*	$ 44,585/90-91
2012	**YOUNG, SIMON N.** ***Psychiatry, McGill*** The effects of diet and dietary components on brain metabolism and function **1990-91 EP Apr 90–Mar 91** *MT-7811*	$ 351,611/82-89 71,920/89-90 66,697/90-91
2013	**YOUSEF, IBRAHIM M.** ***Pharmacologie, Montréal*** **PARADIS, KHAZAL J.-G.** ***Pédiatrie, Montréal*** **WEBER, ANDREE M.** ***Pédiatrie, Montréal*** **TUCHWEBER, BEATRIZ** ***Nutrition, Montréal*** Experimental and clinical studies of neonatal cholestatic syndromes *1990-91 ventilation des dépenses: aide à la recherche, $132,370; appareils, $125,316* **1990-91 EP avr 90–mar 91** *MT-7260*	$ 739,993/80-89 109,262/89-90 257,686/90-91
2014	**YU, PETER H.** ***Psychiatry, Saskatchewan*** Studies on glycinamide and GABAmide anticonvulsant prodrugs, the involvement of monoamine oxidase and their biotransformation **1990-91 EP Apr 90–Mar 91** *MT-10608*	$ 40,399/89-90 53,865/90-91
2015	**ZACHARKO, ROBERT M.** ***Psychology, Carleton*** Central reward processing in the mesolimbic/mesocortical system following stress: implications for clinical depression **1990-91 EP Apr 90–Mar 91** *MA-8130*	$ 114,851/83-89 24,606/89-90 26,008/90-91
2016	**ZALIK, SARA E.** ***Zoology, Alberta*** Studies on the biology of cellular adhesion during embryogenesis **1990-91 EP Apr 90–Mar 91** *MT-7136*	$ 333,484/79-89 56,957/89-90 61,473/90-91
2017	**ZANNIS-HADJOPOULOS, MARIA** ***Medicine, McGill*** Isolation and characterization of mammalian origins of DNA replication **1990-91 EP Apr 90–Mar 91** *MT-7965*	$ 343,581/83-89 90,000/89-90 90,000/90-91
2018	**ZARZECKI, PETER** ***Physiology, Queen's*** Organization of sensory and motor cortex **1990-91 EP Apr 90–Sep 90** *MT-7373*	$ 374,411/80-89 103,689/89-90 29,457/90-91
2019	**ZATORRE, ROBERT J.** ***Neurology and Neurosurgery, McGill*** Complex auditory processing and temporal-lobe function **1990-91 EP Apr 90–Mar 91** *MA-9598*	$ 91,871/85-89 29,627/89-90 29,627/90-91
2020	**ZHU, ZHIREN** ***Ophthalmology, British Columbia*** An experimental approach to subretinal neovascularization **1990-91 EP Apr 90–Mar 91** *MA-10609*	$ 31,500/89-90 42,000/90-91
2021	**ZINGG, HANS H.** ***Medicine, McGill*** Regulation of neuropeptide gene expression **1990-91 EP Apr 90–Mar 91** *MA-8915*	$ 251,580/84-89 71,555/89-90 69,999/90-91
2022	**ZIOLA, BARRY R.** ***Microbiology, Saskatchewan*** Immune interactions among Paramyxoviridae viruses **1990-91 EP Apr 90–Mar 91** *MA-10614*	$ 37,039/89-90 49,385/90-91
2023	**ZIS, ATHANASIOS P.** **LAM, RAYMOND W.** **REMICK, RONALD A.** **CLARK, CAMPBELL M.** ***Psychiatry, British Columbia*** Stimulated prolactin release in depression **1990-91 EP Apr 90–Mar 91** *MA-10615*	$ 29,423/89-90 39,230/90-91
2024	**ZOCHODNE, DOUGLAS W.** ***Medicine, Queen's*** Pharmacologic manipulation of nerve blood flow in diabetes **1990-91 EP Apr 90–Mar 91** *MT-10616*	$ 27,148/89-90 35,721/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2025 **ZUCKER, STEVEN W.** — $ 28,125/89-90, 37,500/90-91
Electrical Engineering, McGill
Computational neuroscience of visual cortex
1990-91 EP Apr 90–Mar 91
MT-10617

2026 **ZWIERS, HINDRIK** — $ 38,070/89-90, 50,760/90-91
Medical Physiology, Calgary
Neuropeptides, phosphoprotein B-50 (GAP43) and neural plasticity
1990-91 EP Apr 90–Mar 91
MA-10618

Equipment Grants/Subventions d'achat d'appareils

Total value/valeur totale: $5,476,191 1990-91.

2027 **ANANTHANARAYANAN, VETTAI S.** — $ 34,500/90-91
Biochemistry, McMaster
Beckman gold peptide/protein II high performance liquid chromatography system
ME-10768

2028 **ANANTHANARAYANAN, VETTAI S.** — $ 23,510/90-91
Biochemistry, McMaster
Perkin-Elmer lambda-6 spectrophotometer
ME-10767

2029 **BELANGER, PIERRE-M.** — $ 32,761/90-91
Pharmacie, Laval
Gilford response II ultraviolet-visible spectrophotometer
ME-10737

2030 **BELIVEAU, RICHARD** — $ 91,000/90-91
Chimie, Québec à Montréal
Ultracentrifugeuse, modèle L8-60M, pour les études portant sur la réabsorption rénale des phosphates
ME-10738

2031 **BKAILY, GHASSAN**
PAYET, MARCEL DANIEL
ROUSSEAU, ERIC C. — $ 60,000/90-91
Physiologie et biophysique, Sherbrooke
"Etireuse" des électrodes du patch et ultracentrifugeuse pour l'isolation des cellules, de fraction microsomale et de protéines transmembranaires
ME-10770

2032 **BORGEAT, PIERRE** — $ 23,805/90-91
Physiologie, Laval
Système de saisie et de traitement des données pour unité de chromatographie gazeuse et spectrométrie de masse (MM-16F)
ME-11162

2033 **BOSE, DEEPAK** — $ 33,105/90-91
Pharmacology and Therapeutics, Manitoba
Recording equipment
ME-10739

2034 **BOUVIER, MICHEL** — $ 23,440/90-91
Biochimie, Montréal
Equipment related to cell culture: microscope and table top centrifuge
ME-11070

2035 **CAVERSON, MONICA M.** — $ 22,000/90-91
Anatomy, Western Ontario
Leitz diaplan microscope
ME-11062

2036 **COBBOLD, RICHARD S.C.** — $ 31,380/90-91
Biomedical Engineering, Toronto
JOHNSTON, K. WAYNE
Surgery, Toronto
Laser for flow visualization
ME-10740

2037 **COTE, AURORE** — $ 41,234/90-91
ARANDA, JACOB V.
Pediatrics, McGill
Packard autogamma counter 5550 system
ME-10756

2038 **CUELLO, A. CLAUDIO G.** — $ 232,000/90-91
Pharmacology and Therapeutics, McGill
Major equipment grant for departmental central facilities
ME-10788

2039 **DAKSHINAMURTI, KRISHNAMURTI** — $ 40,605/90-91
Biochemistry and Molecular Biology, Manitoba
Pharmacia FPLC system for protein purification
ME-10741

2040 **DANIEL, EDWIN E.** — $ 26,884/90-91
Biomedical Sciences, McMaster
Cryostat for immunocytochemistry of gut neuropeptides
ME-11160

2041 **DRAPEAU, PIERRE** — $ 20,938/90-91
Neurology and Neurosurgery, McGill
Quantitative ultraviolet fluorescence microscopy system
ME-10752

2042 **EPAND, RICHARD M.** — $ 97,780/90-91
YANG, DANIEL S.-C.
GHOSH, HARA P.
ANANTHANARAYANAN, VETTAI S.
Biochemistry, McMaster
Graphics terminal and microcomputer for molecular modelling and drug design
ME-10779

2043 **ESCHER, EMANUEL** — $ 50,000/90-91
Pharmacologie, Sherbrooke
HPLC analytique pour la purification de peptides synthétiques et de contrôle de leur pureté
ME-11158

2044 **FINEGOOD, DIANE T.** — $ 17,362/90-91
Medicine, Alberta
Metabolic studies equipment
ME-11166

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2045	**FOURNIER, ALAIN** **ST-PIERRE, SERGE A.** *INRS (Montréal)* Freeze-drying apparatus and accessories for solvent evaporation under reduced pressure *ME-10792*	$ 20,000/90-91
2046	**FROJMOVIC, MONY M.** *Physiology, McGill* **GOLTZMAN, DAVID** *Physiology, McGill* **SONENBERG, NAHUM** *Biochemistry, McGill* **LAPP, WAYNE S.** *Physiology, McGill* **STANNERS, CLIFFORD P.** *Biochemistry, McGill* FACScan analytic flow cytometer *ME-11106*	$ 92,650/90-91
2047	**GAVINO, VICTOR C.** *Nutrition, Montréal* Hewlett-Packard gas chromatograph automatic injector (model 7673A) *ME-10759*	$ 15,826/90-91
2048	**GHOSH, HARA P.** *Biochemistry, McMaster* Ultracentrifuge rotor and Revco freezer *ME-11065*	$ 20,000/90-91
2049	**GOH, JOANNE W.Y.** *Pharmacology and Toxicology, Queen's* Equipment for an electrophysiological laboratory: accumulation of extracellular K+ as a mechanism for induction of hippocampal long-term potentiation *ME-11161*	$ 50,000/90-91
2050	**GOLTZMAN, DAVID** *Physiology, McGill* **HENDY, GEOFFREY N.** *Medicine, McGill* LKB-Pharmacia ultroscan XL laser, IBM personal computer, New Brunswick G24 incubator shaker, and Revco freezer for calcium research *ME-10760*	$ 34,886/90-91
2051	**GORESKY, CARL A.** *Medicine, McGill* Canberra-Packard 5550 gamma counting system *ME-10761*	$ 42,662/90-91
2052	**GOTLIEB, AVRUM I.** **LANGILLE, B. LOWELL** *Pathology, Toronto* Confocal fluorescence imaging system *ME-11167*	$ 132,059/90-91
2053	**HAMET, PAVEL** **MBIKAY, MAJAMBU** **SEIDAH, NABIL G.** **TREMBLAY, JOHANNE** *Médecine, Montréal* Beckman ultracentrifuge rotor *ME-10784*	$ 17,800/90-91
2054	**HAYDEN, MICHAEL R.** *Medical Genetics, British Columbia* **SHAPIRO, R. JEAN** *Medicine, British Columbia* **STEINBRECHER, URS P.** *Medicine, British Columbia* **LEE, C.-Y. GREGORY** *Obstetrics and Gynecology, British Columbia* Du Pont RC-70 ultracentrifuge and rotors *ME-10762*	$ 47,700/90-91
2055	**HESS, ROBERT F.** *Ophthalmology, McGill* Equipment for studies on neural dysfunction in amblyopia *ME-11153*	$ 71,000/90-91
2056	**HEW, CHOY-LEONG** **MOSCARELLO, MARIO A.** **SCHACHTER, HARRY** **KEELEY, FRED W.** *Hospital for Sick Children (Toronto)* Porton gas-phase protein sequencer, Hewlett-Packard Microbore high performance liquid chromatography system, and ancillary equipment for phenylthiohydantoin amino acid analysis at the Biotechnology Service Centre, Hospital for Sick Children *ME-10742*	$ 146,481/90-91
2057	**ISENMAN, DAVID E.** *Biochemistry, Toronto* Beckman VTi65.2 preparative ultracentrifuge rotor *ME-11074*	$ 11,600/90-91
2058	**JACOBS, J. ROGER** *Biology, McMaster* Nikon inverted microscope *ME-11155*	$ 37,583/90-91
2059	**JOHNSTONE, ROSE M.** *Biochemistry, McGill* Purchase of departmental equipment, including an HPLC and a Beckman L8-89M preparative ultracentrifuge *ME-11098*	$ 137,000/90-91
2060	**JONES, DEREK W.** *Dentistry, Dalhousie* High temperature furnace *ME-10763*	$ 18,335/90-91
2061	**JORGENSEN, ANNELISE O.** **OPAS, MICHAL J.** **STEWART, PATRICIA A.** **KALNINS, VITAUTS I.** **AXELRAD, ARTHUR A.** *Anatomy, Toronto* Cryostat and ultracentrifuge *ME-11101*	$ 127,000/90-91
2062	**KANFER, JULIAN N.** *Biochemistry and Molecular Biology, Manitoba* Liquid scintillation counter *ME-11075*	$ 25,000/90-91

N° de liste	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
2063	**KELLY, PAUL A.** *Medicine, McGill* **HENDY, GEOFFREY N.** *Medicine, McGill* **GOLTZMAN, DAVID** *Physiology, McGill* **ZINGG, HANS H.** *Medicine, McGill* **BONDY, GREGORY P.** *Medicine, McGill* DNA synthesizer and Forma chest freezer *ME-10764*	$ 42,706/90-91
2064	**KEOUGH, KEVIN M.W.** *Biochemistry, Memorial University of Newfoundland* Laser scanning densitometer for departmental use *ME-10791*	$ 22,960/90-91
2065	**KREPINSKY, J.J. GEORGE** *Medical Genetics, Toronto* Update of mass spectrometer ZAB SE in the Carbohydrate Research Centre, Faculty of Medicine, University of Toronto *ME-10793*	$ 13,000/90-91
2066	**LAPRADE, RAYNALD** *Physique, Montréal* **VINAY, PATRICK** *Médecine, Montréal* **LAPOINTE, JEAN-YVES** *Physique, Montréal* **SAUVE, REMY** *Physiologie, Montréal* **BERTELOOT, ALFRED** *Physiologie, Montréal* Spectrofluorimètre à double excitation *ME-11061*	$ 85,000/90-91
2067	**LOZANOFF, SCOTT** *Anatomy, Saskatchewan* Leitz diaplan microscope *ME-11072*	$ 9,381/90-91
2068	**MACKENZIE, ROBERT E.** *Biochemistry, McGill* Sorvall RC5B centrifuge and two rotors *ME-10775*	$ 26,089/90-91
2069	**MACKENZIE, ROBERT E.** **MEIGHEN, EDWARD A.** **SONENBERG, NAHUM** *Biochemistry, McGill* Pharmacia FPLC system *ME-10776*	$ 46,546/90-91
2070	**MARCEAU, NORMAND** *Médecine, Laval* **LANDRY, JACQUES** *Médecine, Laval* **FRADET, YVES** *Chirurgie, Laval* **SEGUIN, CARL** *Physiologie, Laval* **MOSS, THOMAS** *Biochimie, Laval* Confocal laser scanning microscope *ME-11073*	$ 132,190/90-91
2071	**MARLISS, ERROL B.** **POUSSIER, PHILIPPE G.A.** **YALE, JEAN-FRANCOIS** *Medicine, McGill* Fluorescence-activated cell analyzer *ME-10781*	$ 155,630/90-91
2072	**MCNEILL, JOHN H.** *Pharmaceutical Sciences, British Columbia* Polygraph recorder *ME-11164*	$ 12,000/90-91
2073	**MILNE, ROSS W.** *Médecine, Montréal* Model 8382 Forma freezer *ME-10777*	$ 16,895/90-91
2074	**MITCHELL, GRANT A.** **LABUDA, DAMIAN** **MELANCON, SERGE B.** **POTIER, MICHEL L.** **LAMBERT, MARIE-A.** *Pédiatrie, Montréal* Thermocycler and mid-speed centrifuge *ME-10772*	$ 53,922/90-91
2075	**MORGAN, A. RICHARD** *Biochemistry, Alberta* **TYRRELL, DAVID L.J.** *Medical Microbiology and Infectious Diseases, Alberta* Pulsed field gel electrophoresis apparatus *ME-11163*	$ 11,776/90-91
2076	**MOSS, THOMAS** *Biochimie, Laval* Low- and intermediate-speed centrifuges *ME-10787*	$ 57,264/90-91
2077	**MULLEN, KATHY T.** *Ophthalmology, McGill* Equipment for a laboratory for the investigation of human color vision by psychophysical methods *ME-11154*	$ 61,990/90-91
2078	**MULLER, WILLIAM J.** *Pathology, McMaster* Equipment to isolate transgenic mice *ME-10782*	$ 49,936/90-91
2079	**NACCACHE, PAUL H.** *Médecine, Laval* Liquid scintillation counter and high-speed centrifuge *ME-11159*	$ 92,097/90-91
2080	**NANCI, ANTONIO** *Médecine dentaire, Montréal* Transmission electron microscope *ME-10753*	$ 400,000/90-91
2081	**NEMER, MONA** **SEIDAH, NABIL G.** **MBIKAY, MAJAMBU** **SEKALY, RAFICK-P.** **DROUIN, JACQUES** *Institut de recherches cliniques de Montréal* Purchase of a DNA synthesizer *ME-10789*	$ 38,257/90-91

N° de liste	Subvention/Bourse	Résumé financier

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2082	**OKEY, ALLAN B.** *Pharmacology, Toronto* Liquid scintillation counter, cell culture hoods and incubators *ME-11066*	$ 64,456/90-91
2083	**ONG, HUY** *Pharmacie, Montréal* **DE LEAN, ANDRE** *Pharmacologie, Montréal* Microbore HPLC system *ME-10744*	$ 34,500/90-91
2084	**ORR, F. WILLIAM** *Pathology, McMaster* **BUCHANAN, MICHAEL R.** *Pathology, McMaster* **CHUI, DAVID H.K.** *Pathology, McMaster* **OFOSU, FREDERICK A.** *Pathology, McMaster* **EPAND, RICHARD M.** *Biochemistry, McMaster* **SINGH, GURMIT** *Pathology, McMaster* **ANDREW, MAUREEN E.** *Pediatrics, McMaster* Packard auto-gamma 5500 counter *ME-11100*	$ 39,219/90-91
2085	**PARE, PETER D.** **DOERSCHUK, CLAIRE M.** **HOGG, JAMES C.** **PARDY, RICHARD L.** **DODEK, PETER M.** **SCHELLENBERG, R. ROBERT** **WALLEY, KEITH R.** *St. Paul's Hospital (Vancouver)* Data acquisition and recording system for small and large animal physiologic studies *ME-10754*	$ 46,000/90-91
2086	**PATEL, YOGESH C.** **SRIKANT, COIMBATORE B.** *Medicine, McGill* A medium-speed and a low-speed refrigerated centrifuge *ME-10780*	$ 50,100/90-91
2087	**PAYET, MARCEL DANIEL** *Physiologie et biophysique, Sherbrooke* **DUPUIS, GILLES** *Biochimie, Sherbrooke* **LUSSIER, ANDRE J.A.** *Médecine, Sherbrooke* **ROUSSEAU, ERIC C.** *Physiologie et biophysique, Sherbrooke* **GALLO-PAYET, NICOLE** *Médecine, Sherbrooke* **BKAILY, GHASSAN** *Physiologie et biophysique, Sherbrooke* **ROLA-PLESZCZYNSKI, MAREK** *Pédiatrie, Sherbrooke* **GUILLEMETTE, GAETAN** *Pharmacologie, Sherbrooke* Achat d'un système d'analyse d'image Fluoroplex III *ME-10745*	$ 110,669/90-91

N° de liste	Subvention/Bourse	Résumé financier
2088	**POSNER, BARRY I.** **FANTUS, I. GEORGE** **KHAN, MASOOD U.N.** *Medicine, McGill* Equipment for the polypeptide hormone research laboratory *ME-10755*	$ 39,985/89-90 30,464/90-91
2089	**POWELL, WILLIAM S.** *Medicine, McGill* High pressure liquid chromatography system *ME-11071*	$ 60,000/90-91
2090	**PROSS, HUGH F.** *Microbiology and Immunology, Queen's* Ultracentrifuge rotors for the department *ME-11102*	$ 47,000/90-91
2091	**QUAMME, GARY A.** *Medicine, British Columbia* Fluorescent imaging system *ME-11060*	$ 89,479/90-91
2092	**REGOLI, DOMENICO C.** *Pharmacologie, Sherbrooke* Synthétiseur automatique de peptides *ME-10746*	$ 127,347/90-91
2093	**RENTON, KENNETH W.** *Pharmacology, Dalhousie* **PETERSON, THERESA C.** *Medicine, Dalhousie* **HOWLETT, SUSAN E.** *Pharmacology, Dalhousie* **BLAY, JONATHAN** *Pharmacology, Dalhousie* **WHITE, THOMAS D.** *Pharmacology, Dalhousie* **OULTON, MARGARET R.** *Obstetrics and Gynecology, Dalhousie* Preparative ultracentrifuge *ME-11064*	$ 50,900/90-91
2094	**ROGERS, KEM A.** **NAUS, CHRISTIAN C.G.** **MERRIFIELD, PETER A.** *Anatomy, Western Ontario* Zeiss Axiophot research photomicroscope and accessories *ME-11103*	$ 49,948/90-91
2095	**ROSE, P. KENNETH** *Physiology, Queen's* A computer-assisted facility to reconstruct and quantify neuronal structures *ME-10747*	$ 54,020/90-91

List No.	Grant/Award	Financial History
2096	**SADOWSKI, PAUL D.** *Medical Genetics, Toronto* **GOLD, MARVIN** *Medical Genetics, Toronto* **BECKER, ANDREW J.** *Medical Genetics, Toronto* **MURIALDO, HELIOS** *Medical Genetics, Toronto* **SHULMAN, MARC J.** *Immunology, Toronto* **WU, GILLIAN E.** *Immunology, Toronto* **BARBER, BRIAN H.** *Immunology, Toronto* **CARVER, JEREMY P.** *Medical Genetics, Toronto* **WATTS, TANIA H.** *Immunology, Toronto* An ultracentrifuge and rotors, two refrigerated centrifuges and rotors, a scintillation counter, and a disk system *ME-10785*	$ 175,000/90-91
2097	**SAIRAM, MALUR R.** *Médecine, Montréal* Equipment for culturing cells *ME-11156*	$ 16,800/90-91
2098	**SANDHAM, H. JAMES** **BIREK, CATALENA** **ELLEN, RICHARD P.** **MCCULLOCH, CHRISTOPHER A.G.** **LIMEBACK, HARDY F.** **DAVIES, JOHN E.** *Dentistry, Toronto* Beckman preparative ultracentrifuge *ME-11104*	$ 68,480/90-91
2099	**SARKAR, BIBUDHENDRA** **MOSCARELLO, MARIO A.** **SCHACHTER, HARRY** **DEBER, CHARLES M.** *Biochemistry, Toronto* Ultraviolet-visible spectrophotometer *ME-10773*	$ 33,949/90-91
2100	**SCHILLER, PETER W.** *Médecine, Montréal* Power conditioner and megabyte disk for operation of a nuclear magnetic resonance facility *ME-11067*	$ 8,745/90-91
2101	**SCHULTZ, GILBERT A.** **MCGHEE, JAMES D.** *Medical Biochemistry, Calgary* DNA thermal cycler *ME-10778*	$ 5,000/90-91

N° de liste	Subvention/Bourse	Résumé financier
2102	**SCOTT, PAUL G.** *Dentistry, Alberta* **VEDERAS, JOHN C.** *Chemistry, Alberta* **AYER, WILLIAM A.** *Chemistry, Alberta* **KOTOVYCH, GEORGE** *Chemistry, Alberta* **CLIVE, DERRICK L.J.** *Chemistry, Alberta* **LOWN, J. WILLIAM** *Chemistry, Alberta* **HINDSGAUL, OLE** *Chemistry, Alberta* Nuclear magnetic resonance data station to be located in the Department of Chemistry *ME-11099*	$ 138,628/90-91
2103	**SEGALL, JACQUELINE M.** *Biochemistry, Toronto* Freeze dryer *ME-10786*	$ 12,219/90-91
2104	**SEGUIN, CARL** **MARESCA, ANTONELLA** *Physiologie, Laval* Ultra-low temperature freezer *ME-10790*	$ 11,000/90-91
2105	**SEN, AMAR K.** *Pharmacology, Toronto* Departmental ultracentrifuge *ME-10771*	$ 70,000/90-91
2106	**SHAFFER, ELDON A.** **MEDDINGS, JONATHAN B.** *Medicine, Calgary* High performance liquid chromatograph for bile salt and lipid analysis *ME-11157*	$ 48,090/90-91
2107	**SHERWOOD, NANCY M.** **BURKE, ROBERT D.** *Biology, Victoria* Ultracentrifuge *ME-10748*	$ 98,610/90-91
2108	**SHORE, GORDON C.** *Biochemistry, McGill* **MURGITA, ROBERT A.** *Microbiology and Immunology, McGill* Equipment for the protein/DNA analytic facility *ME-11097*	$ 75,000/90-91
2109	**SITAR, DANIEL S.** *Pharmacology and Therapeutics, Manitoba* Gas-liquid chromatograph *ME-11165*	$ 36,800/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2110	**SKUP, DANIEL S.** **MES-MASSON, ANNE-MARIE** **JOLIVET, JACQUES** **ROYAL, ANDRE** **WALL, LEE A.** **BRADLEY, W. EDWARD C.** **LANGELIER, YVES** **BIBOR-HARDY, VIVIANE** **RAYMOND, YVES** **KESSOUS-ELBAZ, ALLEGRIA** **KOTHARY, RASHMI K.** ***Institut du cancer, Hôpital Notre-Dame (Montréal)*** Replacement of major equipment at the Institut du cancer *ME-11105*	$ 160,000/90-91
2111	**SONENBERG, NAHUM** ***Biochemistry, McGill*** Carbon dioxide incubator and a Revco low-temperature freezer *ME-10765*	$ 14,810/90-91
2112	**SPENCER, JOHN H.** ***Biochemistry, Queen's*** Departmental Beckman TL100 ultracentrifuge and rotors *ME-10774*	$ 44,316/90-91
2113	**SULAKHE, PRAKASH V.** ***Physiology, Saskatchewan*** Liquid scintillation counter *ME-10749*	$ 44,040/90-91
2114	**SYGUSCH, JURGEN** ***Biochimie, Sherbrooke*** Equipement pour mesures rapides des données en cristallographie des protéines *ME-11068*	$ 94,196/90-91
2115	**SZECHTMAN, HENRY** **PISA, MICHELE A.** **BROWN, GREGORY M.** ***Biomedical Sciences, McMaster*** Cryostat for studies involving autoradiographic, immunocytochemical and histofluorescence techniques *ME-11063*	$ 18,000/90-91
2116	**TRIFARO, JOSE M.** ***Pharmacology, Ottawa*** Departmental L-8-70M preparative ultracentrifuge *ME-10751*	$ 80,000/90-91
2117	**UETRECHT, JACK P.** ***Pharmacy, Toronto*** Fluorescence concentration analyzer *ME-11069*	$ 24,000/90-91
2118	**VALVANO, MIGUEL A.** **KOVAL, SUSAN F.** ***Microbiology and Immunology, Western Ontario*** Beckman refrigerated high-speed centrifuge and rotors *ME-10769*	$ 30,000/90-91

N° de liste	Subvention/Bourse	Résumé financier
2119	**VAN DE WERVE, GERALD** ***Nutrition, Montréal*** Rapid filtration system *ME-10783*	$ 22,089/90-91
2120	**YEN, EDWIN H.K.** ***Dentistry, Manitoba*** **JOHNSON, ROGER B.** ***Anatomy, Manitoba*** *Flexercell strain instrument* *ME-10758*	$ 14,792/90-91

Maintenance Grants/Subventions d'entretien

Total value/valeur totale: $3,577,732 1990-91

2121	**ACKERMANN, HANS W.** ***Microbiologie, Laval*** **BERGERON, MICHEL G.** ***Microbiologie, Laval*** **BEAUCHAMP, DENIS** ***Microbiologie, Laval*** **MOUTON, CHRISTIAN** ***Médecine dentaire, Laval*** Contrat d'entretien pour un microscope Philips EM 300 **1990-91 EP avr 90–mar 91** *MA-10157*	$ 8,640/88-89 8,899/89-90 8,986/90-91
2122	**ADAMSON, IAN Y.R.** ***Pathology, Manitoba*** Maintenance contract for electron microscope **1990-91 EP Apr 90–Mar 91** *MA-6713*	$ 44,195/81-89 7,842/89-90 7,919/90-91

List No.	Grant/Award	Financial History
2123	**ANTHONISEN, NICHOLAS R.** *Medicine, Manitoba* **WARRINGTON, RICHARD J.** *Medicine, Manitoba* **PARASKEVAS, FRIXOS** *Medicine, Manitoba* **HAYGLASS, KENT T.** *Immunology, Manitoba* **SEHON, ALEC H.** *Immunology, Manitoba* **RUSH, DAVID N.** *Medicine, Manitoba* **SHIU, ROBERT P.C.** *Physiology, Manitoba* **RAYNER, DAVID C.** *Pathology, Manitoba* **RECTOR, EDWARD S.** *Immunology, Manitoba* **BERCZI, ISTVAN** *Immunology, Manitoba* **PETTIGREW, NORMAN M.** *Pathology, Manitoba* **CHOW, DONNA A.** *Immunology, Manitoba* **FROESE, ARNOLD** *Immunology, Manitoba* **GARTNER, JOHN G.** *Pathology, Manitoba* **GERRARD, JONATHAN M.** *Pediatrics and Child Health, Manitoba* **CARR, IAN A.** *Pathology, Manitoba* **SABBADINI, EDRIS R.** *Immunology, Manitoba* **WILKINS, JOHN A.** *Medicine, Manitoba* **GREENBERG, ARNOLD H.** *Pediatrics and Child Health, Manitoba* **DICK, TERRY A.** *Zoology, Manitoba* Maintenance of the fluorescence-activated cell sorter in the Faculty of Medicine **1990-91 EP Apr 90–Mar 91** *MA-7822*	$ 301,029/82-89 59,225/89-90 59,800/90-91
2124	**BENDAYAN, MOISE** *Anatomie, Montréal* Maintenance grant for four electron microscopes in the Département d'anatomie, Université de Montréal **1990-91 EP avr 90–mar 91** *MA-4109*	$ 301,971/77-89 55,362/89-90 63,000/90-91
2125	**BENNICK, ANDERS** **HOFMANN, THEO** **ISENMAN, DAVID E.** *Biochemistry, Toronto* Maintenance of protein analytical service facility **1990-91 EP Apr 90–Mar 91** *MA-3843*	$ 114,696/83-89 71,750/89-90 90,000/90-91
2126	**BERGERON, MICHEL** *Physiologie, Montréal* **DOUCET, GUY** *Physiologie, Montréal* **DESCARRIES, LAURENT** *Physiologie, Montréal* **PEYRONNARD, JEAN-MARIE** *Médecine, Montréal* Contrat d'entretien pour un microscope électronique Philips EM 300G **1990-91 EP avr 90–mar 91** *MT-6714*	$ 57,218/81-89 10,279/89-90 11,109/90-91
2127	**BORGEAT, PIERRE** *Physiologie, Laval* Unité de chromatographie gazeuse et spectrométrie de masse (MM-16F): entretien **1990-91 EP avr 90–mar 91** *MA-7821*	$ 158,730/82-89 28,129/89-90 28,402/90-91
2128	**BOULTON, ALAN A.** **DURDEN, DAVID A.** *Psychiatry, Saskatchewan* Maintenance of a high resolution mass spectrometry facility **1990-91 EP Apr 90–Mar 91** *MA-8767*	$ 278,524/84-89 58,995/89-90 58,660/90-91
2129	**BRAEKEVELT, CHARLES R.** *Anatomy, Manitoba* Service contracts for one scanning and two transmission electron microscopes **1990-91 EP Jul 90–Mar 91** *MA-11113*	$ 21,935/90-91
2130	**BRUNETTE, DONALD M.** *Dentistry, British Columbia* Maintenance grant for electron microscopy laboratory **1990-91 EP Apr 90–Mar 91** *MA-7227*	$ 87,139/80-89 14,981/89-90 15,620/90-91
2131	**BRUNHAM, ROBERT C.** *Medical Microbiology, Manitoba* Maintenance grant for a Philips EM 201 electron microscope **1990-91 EP Apr 90–Mar 91** *MA-10159*	$ 4,000/88-89 4,120/89-90 7,436/90-91
2132	**BURKHOLDER, GARY D.** *Anatomy, Saskatchewan* Maintenance grant for electron microscopy laboratory **1990-91 EP Apr 90–Mar 91** *MT-2570*	$ 510,255/67-89 42,632/89-90 43,046/90-91
2133	**CALVERT, RAYMOND** *Anatomie et biologie cellulaire, Sherbrooke* Technicien électronicien spécialisé en microscopie électronique **1990-91 EP avr 90–mar 91** *MT-9441*	$ 144,348/85-89 40,155/89-90 40,544/90-91
2134	**CARVER, JEREMY P.** *Medical Genetics, Toronto* Maintenance grant for the electron microscopy laboratory in the Faculty of Medicine, University of Toronto **1990-91 EP Apr 90–Mar 91** *MA-4038*	$ 381,242/83-89 82,142/89-90 85,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2135	**CARVER, JEREMY P.** *Medical Genetics, Toronto* **KREPINSKY, J.J. GEORGE** *Medical Genetics, Toronto* **DEBER, CHARLES M.** *Biochemistry, Toronto* **DENNIS, JAMES W.** *Medical Genetics, Toronto* **SARKAR, BIBUDHENDRA** *Biochemistry, Toronto* **SCHACHTER, HARRY** *Biochemistry, Toronto* **BENNICK, ANDERS** *Biochemistry, Toronto* Maintenance of the Carbohydrate Research Centre at the University of Toronto **1990-91 EP Apr 90–Mar 91** *MT-6499*	$ 1,012,151/78-89 166,000/89-90 207,500/90-91
2136	**CHURG, ANDREW M.** *Pathology, British Columbia* **STEINBRECHER, URS P.** *Medicine, British Columbia* **WRIGHT, JOANNE L.** *Pathology, British Columbia* **KIM, SEUNG U.** *Medicine, British Columbia* Maintenance of two electron microscopes **1990-91 EP Apr 90–Mar 91** *MT-7820*	$ 109,815/82-89 20,291/89-90 22,510/90-91
2137	**CUELLO, A. CLAUDIO G.** **ROBAIRE, BERNARD** **COLLIER, BRIAN** **HALES, BARBARA F.** **ALMAZAN, GUILLERMINA** *Pharmacology and Therapeutics, McGill* Service contract for maintenance of an electron microscope **1990-91 EP Jul 90–Mar 91** *MT-11108*	$ 10,943/90-91
2138	**CULLIS, PIETER R.** *Biochemistry, British Columbia* **PRITCHARD, P. HAYDN** *Pathology, British Columbia* **BLOOM, MYER** *Physics, British Columbia* **SMITH, MICHAEL** *Biochemistry, British Columbia* **KITSON, C. NEIL** *Medicine, British Columbia* **MCELHANEY, RONALD N.** *Biochemistry, Alberta* **MAUK, A. GRANT** *Biochemistry, British Columbia* Maintenance grant for a nuclear magnetic resonance spectrometer **1990-91 EP Apr 90–Mar 91** *MT-7826*	$ 230,298/82-89 33,166/89-90 38,560/90-91
2139	**DE HARVEN, ETIENNE P.** *Pathology, Toronto* Maintenance of electron microscopes **1990-91 EP Apr 90–Mar 91** *MA-1307*	$ 106,979/83-89 21,467/89-90 21,866/90-91

N° de liste	Subvention/Bourse	Résumé financier
2140	**DEBER, CHARLES M.** *Biochemistry, Toronto* Maintenance of a WP80 SY multinuclear NMR spectrometer **1990-91 EP Apr 90–Mar 91** *MA-8766*	$ 29,732/84-89 6,882/89-90 7,890/90-91
2141	**DES ROSIERS, CHRISTINE** **BRUNENGRABER, HENRI** *Nutrition, Montréal* Upgrading of gas chromatograph - mass spectrometer to negative ion chemical ionization; maintenance contract for the GC-MS *1990-91 ventilation des dépenses: entretien, $13,697; appareils, $32,360* **1990-91 EP jlt 90–mar 91** *MA-10816*	$ 46,057/90-91
2142	**DIKSIC, MIRKO** *Neurology and Neurosurgery, McGill* Medical cyclotron maintenance **1990-91 EP Apr 90–Mar 91** *MA-10708*	$ 85,313/89-90 151,979/90-91
2143	**DOANE, FRANCES W.** *Microbiology, Toronto* Electron microscope maintenance grant **1990-91 EP Apr 90–Mar 91** *MA-4820*	$ 145,408/73-89 9,585/89-90 9,900/90-91
2144	**DURAND, RALPH E.** *Pathology, British Columbia* Maintenance support for a fluorescence-activated cell sorting facility **1990-91 EP Apr 90–Mar 91** *MA-10709*	$ 33,725/89-90 44,967/90-91
2145	**EVANS, ALAN C.** **PETERS, TERENCE M.** *Neurology and Neurosurgery, McGill* Maintenance and equipment for the MNI neuroimaging laboratory (three-dimensional analysis of medical images) *1990-91 expenditure breakdown: maintenance, $60,453; equipment, $73,196* **1990-91 EP Apr 90–Mar 91** *MA-10160*	$ 204,521/88-89 56,157/89-90 133,649/90-91
2146	**FAULKNER, GARY T.** **STOLTZ, DONALD B.** **EASTERBROOK, KENNETH B.** *Microbiology, Dalhousie* Maintenance contracts for two electron microscopes (Philips EM200 and EM300) **1990-91 EP Apr 90–Mar 91** *MT-6891*	$ 61,515/81-89 9,734/89-90 10,314/90-91
2147	**FLUMERFELT, BRIAN A.** *Anatomy, Western Ontario* Maintenance grant for two electron microscopes **1990-91 EP Apr 90–Jun 90** *MA-10156*	$ 23,620/88-89 24,329/89-90 6,141/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2148	**GAULDIE, JACK** *Pathology, McMaster* **UNDERDOWN, BRIAN J.** *Pathology, McMaster* **DOLOVICH, JERRY** *Pediatrics, McMaster* **HARNISH, DELSWORTH G.** *Pathology, McMaster* **ERNST, PETER B.** *Pathology, McMaster* **STANISZ, ANDRZEJ M.** *Pathology, McMaster* **MCDERMOTT, MARK R.** *Pathology, McMaster* **CLARK, DAVID A.** *Medicine, McMaster* **BIENENSTOCK, JOHN B.** *Pathology, McMaster* **ROSENTHAL, KENNETH L.** *Pathology, McMaster* **DENBURG, JUDAH A.** *Medicine, McMaster* Coulter Epics 541 flow cytometer maintenance grant **1990-91 EP Apr 90–Mar 91** *MA-10710*	$ 34,230/89-90 45,640/90-91	2154	**HOLLAND, G. REX** *Dentistry, Alberta* Maintenance of two electron microscopes in the Medicine-Dentistry EM unit **1990-91 EP Jul 90–Mar 91** *MA-11111*	$ 14,306/90-91
2149	**GOYER, ROBERT A.** *Pathology, Western Ontario* Maintenance of electron microscopes **1990-91 EP Apr 90–Mar 91** *MA-5697*	$ 360,969/80-89 46,107/89-90 46,555/90-91	2155	**INABA, TADANOBU** *Pharmacology, Toronto* Maintenance of BIOSPECT gas chromatograph-mass spectrometer **1990-91 EP Apr 90–Mar 91** *MA-5799*	$ 111,727/76-89 14,853/89-90 14,997/90-91
2150	**GWYN, D. GRAHAM** *Anatomy, Dalhousie* Service contracts for electron microscopes in the Department of Anatomy **1990-91 EP Apr 90–Mar 91** *MA-6013*	$ 106,372/77-89 15,136/89-90 15,475/90-91	2156	**JIMBOW, KOWICHI** *Medicine, Alberta* Maintenance grant for a Siemens Elmiskop 102 microscope **1990-91 EP Apr 90–Mar 91** *MA-10711*	$ 5,100/89-90 6,800/90-91
2151	**HAY, JOHN B.** *Immunology, Toronto* Maintenance of flow cytometry facility in the Faculty of Medicine **1990-91 EP Apr 90–Mar 91** *MT-8770*	$ 179,930/84-89 56,650/89-90 61,801/90-91	2157	**JOHNSTONE, ROSE M.** *Biochemistry, McGill* Maintenance of an electron microscope **1990-91 EP Apr 90–Mar 91** *MT-6709*	$ 54,164/81-89 8,893/89-90 10,129/90-91
2152	**HEW, CHOY-LEONG** *Clinical Biochemistry, Toronto* **KEELEY, FRED W.** *Biochemistry, Toronto* **MOSCARELLO, MARIO A.** *Biochemistry, Toronto* Maintenance of the Biotechnology Service Centre at the Hospital for Sick Children (Toronto) **1990-91 EP Apr 90–Mar 91** *MA-8768*	$ 197,965/84-89 72,100/89-90 87,200/90-91	2158	**JONEJA, MADAN G.** *Anatomy, Queen's* Maintenance for electron microscope facility **1990-91 EP Apr 90–Mar 91** *MT-8306*	$ 72,914/83-89 14,296/89-90 22,026/90-91
2153	**HODGES, ROBERT S.** *Biochemistry, Alberta* Maintenance and equipment for the Alberta Peptide Institute *1990-91 expenditure breakdown: equipment (including an amino acid analyser and a protein/peptide sequencer-PTH analyzer), $246,300; maintenance, $100,407* **1990-91 EP Apr 90–Mar 91** *MT-9745*	$ 196,750/86-89 65,507/89-90 346,707/90-91	2159	**KASTRUKOFF, LORNE F.** *Medicine, British Columbia* Maintenance grant for a fluorescence activated cell sorter **1990-91 EP Apr 90–Mar 91** *MT-7824*	$ 306,127/82-89 56,211/89-90 50,017/90-91
			2160	**KEARNEY, ROBERT E.** *Biomedical Engineering, McGill* Maintenance of a shared computing resource for biomedical engineering research **1990-91 EP Apr 90–Mar 91** *MA-9933*	$ 45,372/87-89 30,527/89-90 30,824/90-91
			2161	**KISILEVSKY, ROBERT S.** *Pathology, Queen's* Maintenance costs of electron microscopy unit **1990-91 EP Apr 90–Mar 91** *MA-1427*	$ 244,078/80-89 17,419/89-90 18,614/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2162	**KISILEVSKY, ROBERT S.** *Pathology, Queen's* **DHILLON, MOHAN** *Medicine, Queen's* **YOUNG, PAUL G.** *Biology, Queen's* **COLE, SUSAN P.C.** *Oncology, Queen's* **ELLIOTT, BRUCE E.** *Pathology, Queen's* **PROSS, HUGH F.** *Microbiology and Immunology, Queen's* **SZEWCZUK, MYRON R.** *Microbiology and Immunology, Queen's* **KENNEDY, JAMES C.** *Oncology, Queen's* Maintenance grant for fluorescence activated cell sorter **1990-91 EP Apr 90–Mar 91** *MT-7827*	$ 225,074/82-89 37,020/89-90 42,594/90-91
2163	**KNAUS, EDWARD E.** **WIEBE, LEONARD I.** *Pharmacy and Pharmaceutical Sciences, Alberta* Hewlett-Packard 5995A gas chromatograph-mass spectrometer maintenance contract **1990-91 EP Apr 90–Mar 91** *MT-9443*	$ 75,000/85-89 20,600/89-90 14,130/90-91
2164	**KNAUS, EDWARD E.** *Pharmacy and Pharmaceutical Sciences, Alberta* Bruker AM-300 MHz nuclear magnetic resonance operator salary and maintenance support **1990-91 EP Apr 90–Mar 91** *MA-9729*	$ 139,400/86-89 50,965/89-90 51,460/90-91
2165	**KRAICER, JACOB** **VILIS, TUTIS** *Physiology, Western Ontario* Maintenance of network and shared computer facility **1990-91 EP Apr 90–Mar 91** *MT-6400*	$ 379,956/78-89 36,565/89-90 35,480/90-91
2166	**KRNJEVIC, KRESIMIR** *Physiology, McGill* Salary for electronics technician **1990-91 EP Apr 90–Mar 91** *MA-9677*	$ 88,000/86-89 32,960/89-90 33,280/90-91
2167	**KUKSIS, ARNIS A.** *Banting and Best Department of Medical Research, Toronto* Maintenance for the GC/MS and LC/MS facility at the University of Toronto **1990-91 EP Apr 90–Mar 91** *MA-4732*	$ 504,168/72-89 49,000/89-90 51,000/90-91
2168	**LAFRENIERE, RENE** *Surgery, Calgary* University of Calgary flow cytometry facility **1990-91 EP Apr 90–Jun 90** *MA-10712*	$ 54,687/89-90 18,229/90-91

N° de liste	Subvention/Bourse	Résumé financier
2169	**LETARTE, MICHELLE V.T.** *Immunology, Toronto* **COHEN, AMOS** *Pediatrics, Toronto* **ROIFMAN, CHAIM M.** *Pediatrics, Toronto* **DICK, JOHN E.** *Medical Genetics, Toronto* **DOSCH, HANS-MICHAEL** *Pediatrics, Toronto* **DOHERTY, PAUL J.** *Pediatrics, Toronto* **SILVERMAN, EARL D.** *Pediatrics, Toronto* Coulter Epics V flow cytometer maintenance grant **1990-91 EP Apr 90–Mar 91** *MA-8765*	$ 143,990/84-89 28,750/89-90 30,000/90-91
2170	**MCCULLOCH, CHRISTOPHER A.G.** *Dentistry, Toronto* Maintenance of a flow cytometer/sorter **1990-91 EP Jul 90–Mar 91** *MT-11114*	$ 35,190/90-91
2171	**MICHAUD, JEAN** *Pathologie, Montréal* **CRINE, PHILIPPE J.** *Biochimie, Montréal* **MONTPLAISIR, SERGE** *Microbiologie et immunologie, Montréal* Technicien en microscopie électronique et contrats d'entretien de trois microscopes **1990-91 EP avr 90–mar 91** *MA-10713*	$ 39,436/89-90 52,581/90-91
2172	**MILLER, RICHARD G.** *Immunology, Toronto* Maintenance of a cell sorting facility at the Ontario Cancer Institute **1990-91 EP Apr 90–Mar 91** *MA-10714*	$ 37,590/89-90 50,120/90-91
2173	**MOLDAY, ROBERT S.** *Biochemistry, British Columbia* Service contract for an electron microscope **1990-91 EP Apr 90–Mar 91** *MA-9714*	$ 34,485/86-89 19,051/89-90 21,222/90-91
2174	**MOORE, SEAN** *Pathology, McGill* Maintenance of three transmission electron microscopes and one scanning electron microscope **1990-91 EP Apr 90–Mar 91** *MA-2464*	$ 140,819/83-89 43,293/89-90 45,154/90-91
2175	**NAKATSU, KANJI** *Pharmacology and Toxicology, Queen's* Maintenance of gas chromatograph-mass spectrometer **1990-91 EP Apr 90–Mar 91** *MT-6720*	$ 90,771/81-89 12,793/89-90 16,326/90-91
2176	**OSMOND, DENNIS G.** *Anatomy, McGill* Electron microscope maintenance grant **1990-91 EP Apr 90–Mar 91** *MA-3293*	$ 811,913/68-89 88,539/89-90 92,985/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2177	**PHILIPPE, ERIC** **PARENT, ANDRE** **TREMBLAY, JACQUES P.** *Anatomie, Laval* Subvention d'entretien d'un microscope électronique Philips 300 **1990-91 EP avr 90–mar 91** *MA-7832*	$ 37,615/84-89 9,735/89-90 10,080/90-91	2183	**POWELL, WILLIAM S.** *Medicine, McGill* **SCRIVER, CHARLES R.** *Pediatrics, McGill* **HOFFER, L. JOHN** *Medicine, McGill* **MAMER, ORVAL A.** *Medicine, McGill* **SOLOMON, SAMUEL** *Medicine, McGill* **WOLFE, LEONHARD S.** *Neurology and Neurosurgery, McGill* Biomedical gas chromatography - mass spectrometry maintenance **1990-91 EP Apr 90–Mar 91** *MT-6712*	$ 431,641/81-89 58,710/89-90 59,280/90-91
2178	**PHILLIPS, M. JAMES** *Pathology, Toronto* Maintenance grant for two electron microscopes in the Department of Pathology at the Hospital for Sick Children **1990-91 EP Apr 90–Mar 91** *MA-6719*	$ 249,151/83-89 56,302/89-90 59,018/90-91	2184	**QUAMME, GARY A.** *Medicine, British Columbia* Analytical electron microprobe maintenance **1990-91 EP Apr 90–Mar 91** *MA-5431*	$ 275,365/80-89 27,501/89-90 29,335/90-91
2179	**PILARSKI, LINDA M.** *Immunology, Alberta* **GUILBERT, LARRY J.** *Immunology, Alberta* **MCGANN, LOCKSLEY E.** *Pathology, Alberta* **CASS, CAROL E.** *Biochemistry, Alberta* Maintenance of flow cytometry facility **1990-91 EP Apr 90–Mar 91** *MA-10715*	$ 37,040/89-90 49,386/90-91	2185	**RAJARAMAN, RENGASWAMI** *Microbiology, Dalhousie* Maintenance of the central fluorescence activated cell sorter service **1990-91 EP Apr 90–Mar 91** *MA-9744*	$ 124,250/86-89 33,796/89-90 15,000/90-91
2180	**PON, RICHARD T.** **VAN DE SANDE, JOHAN H.** *Medical Biochemistry, Calgary* Salary support for a synthesis technician in the regional DNA synthesis laboratory **1990-91 EP Jul 90–Mar 91** *MT-11112*	$ 12,000/90-91	2186	**RATTNER, JEROME B.** *Anatomy, Calgary* Service of electron microscope facility **1990-91 EP Apr 90–Mar 91** *MA-6718*	$ 261,685/84-89 62,401/89-90 63,869/90-91
2181	**POTIER, MICHEL L.** *Pédiatrie, Montréal* Opération et entretien d'un irradiateur Gammacell 220 **1990-91 EP avr 90–mar 91** *MT-8769*	$ 63,167/84-89 16,326/89-90 17,622/90-91	2187	**RENNIE, ROBERT P.** *Microbiology, Saskatchewan* Maintenance of electron microscopes and electron-probe X-ray analytical system **1990-91 EP Apr 90–Mar 91** *MA-4892*	$ 230,206/73-89 27,170/89-90 27,434/90-91
2182	**POWELL, WILLIAM S.** *Medicine, McGill* **SCRIVER, CHARLES R.** *Pediatrics, McGill* **MAMER, ORVAL A.** *Medicine, McGill* **WOLFE, LEONHARD S.** *Neurology and Neurosurgery, McGill* **SOLOMON, SAMUEL** *Medicine, McGill* **HOFFER, L. JOHN** *Medicine, McGill* Service contract for a Hewlett-Packard model 5988 mass spectrometer **1990-91 EP Jul 90–Mar 91** *MA-11110*	$ 13,041/90-91	2188	**ROBERGE, FERNAND A.** *Génie biomédical, Montréal* **NADEAU, REGINALD A.** *Médecine, Montréal* Maintenance of medical computing facilities **1990-91 EP avr 90–mar 91** *MA-9207*	$ 169,700/85-89 64,972/89-90 69,696/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2189	**ROUGHLEY, PETER J.** *Surgery, McGill* **CONGOTE, L. FERNANDO** *Medicine, McGill* **THOMSON, DAVID M.P.** *Medicine, McGill* **BENNETT, HUGH P.J.** *Medicine, McGill* **SONENBERG, NAHUM** *Biochemistry, McGill* **SOLOMON, SAMUEL** *Medicine, McGill* **MORT, JOHN S.** *Surgery, McGill* **POOLE, A. ROBIN** *Surgery, McGill* **PATEL, YOGESH C.** *Medicine, McGill* **GOLTZMAN, DAVID** *Physiology, McGill* **STANNERS, CLIFFORD P.** *Biochemistry, McGill* Maintenance of an Applied Biosystems 470A gas-phase protein sequencer **1990-91 EP Apr 90–Jun 90** *MA-9628*	$ 81,250/85-89 25,750/89-90 6,500/90-91
2190	**ROWDEN, GEOFFREY** *Pathology, Dalhousie* Maintenance for a Philips TEM 300 electron microscope **1990-91 EP Apr 90–Mar 91** *MA-8950*	$ 30,517/85-89 7,107/89-90 7,176/90-91
2191	**ROY, PAUL-EMILE** *Pathologie, Laval* **DESLAURIERS, NOELLA** *Biochimie, Laval* **ROY, JEAN-PAUL** *Chirurgie, Laval* **SIMARD, CLERMONT** *Education physique, Laval* **BUKOWIECKI, LUDWIK J.** *Physiologie, Laval* **GUIDOIN, ROBERT G.** *Chirurgie, Laval* Entretien d'un microscope électronique à transmission (Philips 300) *MA-9444*	$ 31,534/85-89 11,330/89-90 9,460/90-91
2192	**RUSSELL, JAMES C.** *Surgery, Alberta* Support for breeding colony of obese JCR:LA-cp rats **1990-91 EP Jul 90–Mar 91** *MA-11122*	$ 7,500/90-91
2193	**SANDERS, ESMOND J.** *Physiology, Alberta* Maintenance for a Philips 300 electron microscope **1990-91 EP Apr 90–Mar 91** *MT-7226*	$ 50,968/80-89 8,889/89-90 10,128/90-91
2194	**SCHILLER, PETER W.** *Médecine, Montréal* **DE LEAN, ANDRE** *Pharmacologie, Montréal* **LAZURE, CLAUDE** *Médecine, Montréal* **BELLEAU, BERNARD** *Institut Armand-Frappier (Laval-des-Rapides)* Maintenance of a molecular modelling system (computer graphics) **1990-91 EP avr 90–mar 91** *MA-10131*	$ 47,121/88-89 64,712/89-90 65,340/90-91
2195	**SCOTT, PAUL G.** *Dentistry, Alberta* **KOTOVYCH, GEORGE** *Chemistry, Alberta* Salary of an amino acid analysis technologist **1990-91 EP Apr 90–Mar 91** *MA-7962*	$ 261,379/79-89 33,403/89-90 37,872/90-91
2196	**SCRABA, DOUGLAS G.** *Biochemistry, Alberta* Service contract for Philips EM420-STEM electron microscope **1990-91 EP Apr 90–Mar 91** *MA-4756*	$ 78,294/77-89 13,436/89-90 13,567/90-91
2197	**SEELY, JOHN F.** *Health Sciences, Ottawa* Maintenance for the electron microscope facility at the Health Sciences Centre **1990-91 EP Apr 90–Mar 91** *MT-9635*	$ 447,885/80-89 46,399/89-90 79,212/90-91
2198	**SEKALY, RAFICK-P.** **CHIASSON, JEAN-LOUIS** **MILNE, ROSS W.** **JOLICOEUR, PAUL** **DAVIGNON, JEAN** **NEMER, MONA** **HOANG, TRANG K.** **HAMET, PAVEL** **DROUIN, JACQUES** *Institut de recherches cliniques de Montréal* Maintenance of a flow cytometry facility **1990-91 EP jlt 90–mar 91** *MT-11109*	$ 39,450/90-91
2199	**SHORE, GORDON C.** *Biochemistry, McGill* **MURGITA, ROBERT A.** *Microbiology and Immunology, McGill* Maintenance of the protein/DNA analytic facility **1990-91 EP Jul 90–Mar 91** *MA-11107*	$ 57,000/90-91
2200	**SIMON, GERARD T.** *Pathology, McMaster* To operate and maintain the electron microscopy facility of the Faculty of Health Sciences at McMaster University **1990-91 EP Apr 90–Mar 91** *MT-6691*	$ 340,336/80-89 71,931/89-90 72,629/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2201	**SINCLAIR, NICHOLAS R.ST.C.** *Microbiology and Immunology, Western Ontario* Maintenance of electron microscopes **1990-91 EP Apr 90–Mar 91** *MT-7829*	$ 148,103/82-89 22,289/89-90 22,506/90-91	2207	**TYRRELL, DAVID L.J.** *Medical Microbiology and Infectious Diseases, Alberta* **PREIKSAITIS, JUTTA K.** *Medicine, Alberta* **MARUSYK, RAYMOND G.** *Medical Microbiology and Infectious Diseases, Alberta* **ARMSTRONG, GLEN D.** *Medical Microbiology and Infectious Diseases, Alberta* **ROBERTSON, JANET A.** *Medical Microbiology and Infectious Diseases, Alberta* **WENMAN, WANDA M.** *Pediatrics, Alberta* **PEPPLER, MARK S.** *Medical Microbiology and Infectious Diseases, Alberta* **TAYLOR, DIANE E.** *Medical Microbiology and Infectious Diseases, Alberta* Maintenance grant for a Philips 300 electron microscope **1990-91 EP Apr 90–Mar 91** *MA-10716*	$ 7,425/89-90 9,900/90-91
2202	**SIU, DAVID W.-H.** *Surgery, Queen's* **COOKE, T. DEREK V.** *Surgery, Queen's* **WEVERS, HENDRIK W.** *Mechanical Engineering, Queen's* Maintenance of a local area network of digital computers and prototype manufacturing testing equipment in the clinical mechanics group at Queen's University **1990-91 EP Apr 90–Mar 91** *MA-10717*	$ 10,500/89-90 11,375/90-91			
2203	**SLONECKER, CHARLES E.** *Anatomy, British Columbia* Maintenance of electron microscope facilities **1990-91 EP Apr 90–Mar 91** *MA-10155*	$ 22,216/88-89 22,882/89-90 22,579/90-91			
2204	**STEVENS, JOHN K.** *Physiology, Toronto* Maintenance support for a 100CX electron microscope **1990-91 EP Apr 90–Mar 91** *MA-8304*	$ 70,327/83-89 14,667/89-90 15,201/90-91	2208	**WEBER, JOSEPH** **FROST, ERIC** **CHABOT, BENOIT** **THIRION, JEAN-PAUL** **BOURGAUX, PIERRE J.A.** **BOURGAUX-RAMOISY, DANIELLE L.H.G.** **BASTIN, MARCEL F.** *Microbiologie, Sherbrooke* Subvention d'entretien pour six ultracentrifuges **1990-91 EP jlt 90–mar 91** *MA-10817*	$ 7,020/90-91
2205	**TEN CATE, A. RICHARD** *Dentistry, Toronto* Maintenance of the electron microscopy facility **1990-91 EP Apr 90–Mar 91** *MA-9932*	$ 19,661/87-89 11,572/89-90 11,684/90-91			
2206	**THOMPSON, CHRISTOPHER J.** *Neurology and Neurosurgery, McGill* Maintenance grant for equipment and salaries: MNI research computing laboratory **1990-91 EP Apr 90–Mar 91** *MA-3821*	$ 384,780/69-89 34,436/89-90 31,297/90-91			

Development Grants/Subventions de développement

Total value: $3,867,639 1990-91 (research support, $627,980; equipment, $270,777; investigators' salaries, $2,968,882).

Valeur totale: $3,867,639 1990-91 (aide à la recherche, $627,980; appareils, $270,777; salaires des chercheurs, $2,968,882).

2209	**BLANCHETOT, ALAIN D.** *Biochemistry, Saskatchewan* Minisatellites as tools for the genetic control of mosquitoes *1990-91 expenditure breakdown: research support, $44,400; investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-371, -372*	$ 65,900/88-89 44,400/89-90 44,400/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2210 **BRECKENRIDGE, W. CARL**
Biochemistry, Dalhousie
Studies of plasma phospholipid and lipoprotein metabolism
1990-91 expenditure breakdown: investigator's salary (0.25 person-year)
1990-91 EP Apr 90–Jun 90
DG-228

2211 **BRUNENGRABER, HENRI**
Nutrition, Montréal
Nutritional aspects of lipid metabolism in the liver
1990-91 ventilation des dépenses: salaire du chercheur (0.25 année-personne)
1990-91 EP avr 90–jui 90
DG-315

2212 **BUSHNELL, M. CATHERINE**
Médecine dentaire, Montréal
The role of the thalamus and cortex in pain perception
1990-91 ventilation des dépenses: salaire de la chercheuse (1.0 année-personne)
1990-91 EP avr 90–mar 91
DG-329

2213 **CARAYANNIOTIS, GEORGE** — $ 115,100/89-90, 55,000/90-91
Medicine, Memorial University of Newfoundland
An adjuvant-free approach for the study of immunoregulatory factors controlling the induction of experimental autoimmune thyroiditis
1990-91 expenditure breakdown: research support, $55,000; investigator's salary (1.0 person-year)
1990-91 EP Apr 90–Mar 91
DG-388, -389

2214 **DEELEY, ROGER G.**
Pathology, Queen's
The effect of steroid hormones on gene expression in avian liver
1990-91 expenditure breakdown: investigator's salary (0.17 person-year)
1990-91 EP Apr 90–May 90
DG-217

2215 **DELESPESSE, GUY J.T.**
Médecine, Montréal
Regulation of human IgE synthesis; idiotypes-anti-idiotypes interactions in allergic patients
1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)
1990-91 EP avr 90–mar 91
DG-347

2216 **DIXON, S. JEFFREY**
Dentistry, Western Ontario
Intracellular free calcium and pH of osteoblasts: effects of peptide hormones and prostaglandins
1990-91 expenditure breakdown: investigator's salary (1.0 person-year)
1990-91 EP Apr 90–Mar 91
DG-361

2217 **DOWNIE, JOHN W.**
Pharmacology, Dalhousie
Lower urinary tract physiology, pharmacology and dysfunction in neurogenic disorders
1990-91 expenditure breakdown: investigator's salary (1.0 person-year)
1990-91 EP Apr 90–Mar 91
DG-243

2218 **DUNCAN, GARY H.**
Médecine dentaire, Montréal
Psychophysical studies of the intensity and unpleasantness of pain
1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)
1990-91 EP avr 90–mar 91
DG-327

2219 **FISHER, JOHN T.**
Physiology, Queen's
Control of airway calibre and chest wall motion in the newborn
1990-91 expenditure breakdown: investigator's salary (1.0 person-year)
1990-91 EP Apr 90–Mar 91
DG-331

2220 **FRASER, WILLIAM D.**
Obstétrique et gynécologie, Laval
Etude multicentre randomisée de l'amniotomie précoce
1990-91 ventilation des dépenses: salaire du chercheur (0.75 année-personne)
1990-91 EP jlt 90–mar 91
DG-401

2221 **GALLO-PAYET, NICOLE**
Médecine, Sherbrooke
Mécanisme d'action de l'ACTH et de la vasopressine dans la glande surrénale
1990-91 ventilation des dépenses: salaire de la chercheuse (1.0 année-personne)
1990-91 EP avr 90–mar 91
DG-301

2222 **GRENIER, DANIEL** — $ 168,250/89-90, 54,675/90-91
Médecine dentaire, Montréal
Rôle et importance des activités protéolytiques des organismes anaérobies Gram-négatifs dans la pathogenèse des maladies parodontales
1990-91 ventilation des dépenses: aide à la recherche, $54,675; salaire du chercheur (1.0 année-personne)
1990-91 EP avr 90–mar 91
DG-383, -384

2223 **HOUDE, DANIEL** — $ 729,718/87-89, 57,989/89-90, 36,435/90-91
Médecine nucléaire et radiobiologie, Sherbrooke
Implantation d'une installation laser à l'échelle femtoseconde: études spectroscopiques de processus physico-chimiques transitoires d'intérêt biologique
1990-91 ventilation des dépenses: aide à la recherche d'avril 1990 à juin 1990, $14,638; salaire du chercheur d'avril 1990 à mars 1991 (1.0 année-personne); appareils, $21,797
DG-368,69,70

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2224	**HUBBARD, JOHN W.** ***Pharmacy, Saskatchewan*** Stereospecific radioimmunoassay procedures for the enantiomers of threomethyl phenidate, ritalinic acid, penicillamine, propranolol and 4-hydroxypropranolol, and their comparison with chemical analytical procedures *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-247*		2231	**LAFERTE, SUZANNE** ***Biochemistry, Saskatchewan*** Expression, glycosylation and possible function of two leucoagglutinin-binding glycoproteins during tissue development and malignant transformation *1990-91 expenditure breakdown: research support, $47,000; investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-374, -375*	$ 75,000/88-89 47,000/89-90 47,000/90-91
2225	**JOLICOEUR, FRANCOIS B.** ***Psychiatrie, Sherbrooke*** Neurobehavioural effects of neurotensin *1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)* **1990-91 EP avr 90–mar 91** *DG-283*		2232	**LEE, JEREMY S.** ***Biochemistry, Saskatchewan*** Antibodies to nucleic acids *1990-91 expenditure breakdown: investigator's salary (0.25 person-year)* **1990-91 EP Apr 90–Jun 90** *DG-273*	
2226	**JOLIVET, JACQUES** ***Médecine, Montréal*** The biochemical pharmacology of methotrexate and leucovorin *1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)* **1990-91 EP avr 90–mar 91** *DG-303*		2233	**LEE, PING I.** ***Pharmacy, Toronto*** Programmable drug delivery systems *1990-91 expenditure breakdown: research support, $75,000; investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-377, -378*	$ 233,226/89-90 75,000/90-91
2227	**JONES, GLENVILLE** ***Medicine, Queen's*** Side chain hydroxylations of vitamin D, vitamin D receptors and retinoids *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-305*		2234	**LEFEBVRE, YVONNE A.** ***Medicine, Ottawa*** Translocation of steroid and thyroid hormones across cell membranes *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-363*	
2228	**KHANDELWAL, RAMJI L.** ***Biochemistry, Saskatchewan*** The regulation of glycogen metabolism in liver *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-241*		2235	**LEMAIRE, IRMA** ***Pharmacology, Ottawa*** Immune effector cells response and regulation of fibroblast function: its role in interstitial lung disorders *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-350*	
2229	**KIM, SEUNG U.** ***Medicine, British Columbia*** Neurobiology of oligodendrocytes *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-236*		2236	**LOOMIS, CHRISTOPHER W.** ***Pharmacy, Memorial University of Newfoundland*** A study of noradrenergic spinal analgesia in the rat *1990-91 expenditure breakdown: research support, $22,100; investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-386, -387*	$ 16,575/89-90 22,100/90-91
2230	**KRANTIS, ANTHONY** ***Physiology, Ottawa*** Enteric neurotransmission: gastrointestinal motility and duodenal ulcer *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-345*		2237	**MASSEY, THOMAS E.** ***Pharmacology and Toxicology, Queen's*** Pulmonary xenobiotic biotransformation and toxicity *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-333*	

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2238	**MCCOLL, SHAUN R.** ***Médecine, Laval*** Mechanism(s) of neutrophil activation in inflammation *1990-91 ventilation des dépenses: aide à la recherche, $51,200* **1990-91 EP avr 90–mar 91** *DG-382*	$ 86,200/89-90 51,200/90-91
2239	**MILOS, NADINE C.** ***Dentistry, Alberta*** Neural crest lectins and birth defects *1990-91 expenditure breakdown: investigator's salary (0.75 person-year)* **1990-91 EP Jul 90–Mar 91** *DG-393*	
2240	**MOUTON, CHRISTIAN** ***Médecine dentaire, Laval*** Immunobiology of Bacteroides gingivalis *1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)* **1990-91 EP avr 90–mar 91** *DG-245*	
2241	**NANCI, ANTONIO** ***Médecine dentaire, Montréal*** Immunocytochemical studies on the enamel organ *1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)* **1990-91 EP avr 90–mar 91** *DG-314*	
2242	**NESHEIM, MICHAEL E.** ***Medicine, Queen's*** Functional properties of prothrombinase *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-311*	
2243	**O'BRIEN, PETER J.** ***Pharmacy, Toronto*** The molecular basis of drug toxicity *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-349*	
2244	**PANG, K. SANDY** ***Pharmacy, Toronto*** Interrelationships between organ and in vivo clearances of drugs and metabolites *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-262*	
2245	**PATER, ALAN** ***Microbiology, Memorial University of Newfoundland*** Oncogenesis of primary human cells by BK virus *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-324*	
2246	**PATER, MARY M.** ***Microbiology, Memorial University of Newfoundland*** Studies of gene expression by human papilloma viruses *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-322*	
2247	**PATO, MARY D.** ***Biochemistry, Saskatchewan*** Study of the regulation and function of smooth muscle phosphatases *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-291*	
2248	**PELZER, DIETER J.** **PELZER, SIEGRIED** ***Physiology and Biophysics, Dalhousie*** Properties and modulation of calcium and other channels *1990-91 expenditure breakdown: research support, $88,688; equipment, $148,500; investigators' salaries (1.5 person-years)* **1990-91 EP Jul 90–Mar 91** *DG-396,-7,-8*	$ 237,188/90-91
2249	**PIERSON, ROGER A.** **SIMPSON, CHARLES W.** ***Obstetrics and Gynecology, Saskatchewan*** Human ovarian follicular population dynamics *1990-91 expenditure breakdown: research support, $36,250; salary support for Dr. Pierson (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-380, -381*	$ 60,275/89-90 36,250/90-91
2250	**RADZIUK, JERRY M.** ***Medicine, Ottawa*** Disposal of a carbohydrate load: tissue sites, metabolic pathways and regulation *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-364*	
2251	**REID, ROBERT L.** ***Obstetrics and Gynecology, Queen's*** Gonadal steroid-induced changes in endogenous opiate peptide activity and their role in the pathophysiology of premenstrual syndrome *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-288*	
2252	**ROESLER, WILLIAM J.** ***Biochemistry, Saskatchewan*** Analysis of the architectural arrangement of promoter and enhancer elements in the phosphoenolpyruvate carboxykinase promoter *1990-91 expenditure breakdown: research support, $51,075; equipment, $30,880; investigator's salary (0.75 person-year)* **1990-91 EP Jul 90–Mar 91** *DG-391, -392*	$ 81,955/90-91

List No.	Grant/Award	Financial History
2253	**RUIZ-CARRILLO, ADOLFO** ***Biochimie, Laval*** Molecular control of histone gene expression in chicken *1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)* **1990-91 EP avr 90–mar 91** *DG-276*	
2254	**SKUP, DANIEL S.** ***Biochimie, Montréal*** Régulation de l'expression génétique en cellules de carcinome embryonnaire; génétique moléculaire des interférons; expression génétique du gène de l'inhibiteur tissulaire des métalloprotéinases et son rôle lors de la formation de métastases *1990-91 ventilation des dépenses: salaire du chercheur (1.0 année-personne)* **1990-91 EP avr 90–mar 91** *DG-279*	
2255	**SOJA, PETER J.** ***Pharmaceutical Sciences, British Columbia*** State-dependent reticular control of lumbar sensory neurons *1990-91 expenditure breakdown: research support, $42,450; equipment, $27,600; investigator's salary (0.75 person-year)* **1990-91 EP Jul 90–Mar 91** *DG-399, -400*	$ 70,050/90-91
2256	**THORNHILL, JAMES A.** ***Physiology, Saskatchewan*** The physiological role of endogenous opioid peptides in thermoregulation *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-239*	
2257	**TURGEON, JACQUES** ***Pharmacie, Laval*** Modulation of antiarrhythmic drug effects *1990-91 ventilation des dépenses: aide à la recherche, $30,750; appareils, $42,000; salaire du chercheur (0.75 année-personne)* **1990-91 EP jlt 90–mar 91** *DG-394, -395*	$ 72,750/90-91
2258	**UITTO, V. VELI-JUKKA** ***Dentistry, British Columbia*** Role of bacterial products in periodontal diseases *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-367*	
2259	**VAN DE WERVE, GERALD** ***Nutrition, Montréal*** Hormonal regulation of hepatic carbohydrate metabolism in health and disease *1990-91 ventilation des dépenses: aide à la recherche d'avril 1990 à juin 1990, $14,754; salaire du chercheur d'avril 1990 à mars 1991 (1.0 année-personne)* *DG-356, -358*	$ 181,813/86-89 58,453/89-90 14,754/90-91
2260	**VAN VUGT, DEAN A.** ***Obstetrics and Gynecology, Queen's*** Hypothalamic regulation of the primate menstrual cycle *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-342*	
2261	**WAISMAN, DAVID M.** ***Medical Biochemistry, Calgary*** Covalent regulation of Ca2+-binding proteins *1990-91 expenditure breakdown: investigator's salary (0.25 person-year)* **1990-91 EP Apr 90–Jun 90** *DG-258*	
2262	**WEST, NIGEL H.** ***Physiology, Saskatchewan*** Investigation of the regulation of the cardiovascular response to asphyxia *1990-91 expenditure breakdown: investigator's salary (1.0 person-year)* **1990-91 EP Apr 90–Mar 91** *DG-250*	

Subject Research Development Grants/ Subventions de développement thématique

Total value: $14,433 1990-91, plus salary support for one investigator.

Valeur totale: $14,433 1990-91, plus appui salarial d'une chercheuse.

2263	**ADAMSON, S. LEE** ***Obstetrics and Gynecology, Toronto*** Stimulation of lung gas exchange in utero *1990-91 expenditure breakdown: research support from July 1990 to September 1990, $14,433; investigator's salary from April 1990 to June 1990 (0.25 person-year)*	$ 165,185/86-89 14,433/89-90 14,433/90-91

Biotechnology Development Grants/ Subventions de développement des biotechnologies

Total value (1990-91): salary support for two investigators.

Valeur totale (1990-91): appui salarial pour deux chercheurs.

2264	**MOSS, THOMAS** ***Biochimie, Laval*** Ribosomal transcription in Xenopus laevis *1990-91 ventilation des dépenses: salaire du chercheur (0.67 année-personne)* **1990-91 EP avr 90–nov 90**
2265	**WATTS, TANIA H.** ***Immunology, Toronto*** Supported planar membranes in studies of cell-cell recognition in the immune system *1990-91 expenditure breakdown: investigator's salary (0.67 person-year)* **1990-91 EP Apr 90–Mar 91**

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

NHRDP-MRC Joint Program for Development of Research in Nursing/ Programme conjoint PNRDS-CRM pour le développement de la recherche en sciences infirmières

Total value: $228,670 1990-91, of which $48,500 was recovered from Health and Welfare Canada.

Valeur totale: $228,670 1990-91, dont $48,500 a été recouvré de Santé et bien-être social Canada.

2266 **JOHNSTON, C. CELESTE**
Nursing, McGill
Pain studies in children
1990-91 expenditure breakdown: includes both a contribution towards the investigator's salary and a research allowance of $20,000
1990-91 EP Apr 90–Mar 91

2267 **LEVESQUE, LOUISE**
Sciences infirmières, Montréal
Etude de facteurs associés au bien-être des soignants naturels principaux des malades atteints de la maladie d'Alzheimer
1990-91 ventilation des dépenses: participation au salaire de la chercheuse seulement
1990-91 EP sep 90–mar 91

2268 **LLEWELLYN-THOMAS, HILARY A.**
Nursing, Toronto
Information and decision-making by providers and patients
1990-91 expenditure breakdown: contribution towards the investigator's salary only
1990-91 EP Apr 90–Mar 91

2269 **MORSE, JANICE M.**
Nursing, Alberta
Comfort of the patient
1990-91 expenditure breakdown: includes both a contribution towards the investigator's salary and a research allowance of $20,000
1990-91 EP Apr 90–Mar 91

2270 **O'CONNOR, ANNETTE M.**
Nursing, Ottawa
Decision making by patients across various clinical contexts
1990-91 expenditure breakdown: includes both a contribution towards the investigator's salary and a research allowance of $20,000
1990-91 EP Jan 91–Mar 91

MRC Groups/Groupes du CRM

Total value: $14,057,440 1990-91 (research support, $10,819,869; equipment, $762,140; investigators' salaries, $2,475,431).

Valeur totale: $14,057,440 1990-91 (aide à la recherche, $10,819,869; appareils, $762,140; salaires des chercheurs, $2,475,431).

2271 **ABRAHAMS, VIVIAN C.** $ 550,000/90-91
Physiology, Queen's
MACPHERSON, JANE M.
Good Samaritan Hospital (Portland, Oregon)
RICHMOND, FRANCES J.R.
Physiology, Queen's
MUNOZ, DOUGLAS P.
Physiology, Queen's
LOEB, GERALD E.
Biomedical Engineering, Queen's
ROBERTSON, R. MELDRUM
Biology, Queen's
ZARZECKI, PETER
Physiology, Queen's
ROSE, P. KENNETH
Physiology, Queen's
Sensory-motor physiology
1990-91 expenditure breakdown: research support, $250,000; investigators' salaries (Abrahams, Loeb) (1.0 person-year); equipment, $300,000
1990-91 EP Oct 90–Mar 91

2272 **ATWOOD, HAROLD L.** $ 266,040/90-91
Physiology, Toronto
MACDONALD, JOHN F.
Physiology, Toronto
CHARLTON, MILTON P.
Physiology, Toronto
CARLEN, PETER L.
Medicine, Toronto
HAMPSON, DAVID R.
Pharmacy, Toronto
WOJTOWICZ, JAN M.
Physiology, Toronto
PENNEFATHER, PETER S.
Pharmacy, Toronto
Nerve cells and synapses
1990-91 expenditure breakdown: research support, $155,500; investigator's salary (Atwood) (0.25 person-year); equipment, $110,540
1990-91 EP Jan 91–Mar 91

2273 **BROWN, JOHN C.** $ 1,748,404/86-89
MCINTOSH, CHRISTOPHER H.S. 661,282/89-90
PEDERSON, RAYMOND A. 616,753/90-91
BUCHAN, ALISON M.J.
KWOK, K. YIN-NAM
Physiology, British Columbia
Regulatory peptides
1990-91 expenditure breakdown: research support, $616,753; investigators' salaries (Brown, Buchan, Kwok) (3.0 person-years)
1990-91 EP Apr 90–Mar 91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2274	**CHALLIS, JOHN R.G.** *Obstetrics and Gynecology, Western Ontario* **BOCKING, ALAN D.** *Obstetrics and Gynecology, Western Ontario* **HAN, VICTOR K.M.** *Pediatrics, Western Ontario* **HILL, DAVID J.** *Medicine, Western Ontario* **RICHARDSON, BRYAN S.** *Obstetrics and Gynecology, Western Ontario* **HAMMOND, GEOFFREY L.** *Obstetrics and Gynecology, Western Ontario* **OLSON, DAVID M.** *Pediatrics, Western Ontario* **POSSMAYER, FRED** *Obstetrics and Gynecology, Western Ontario* Fetal and neonatal health and development *1990-91 expenditure breakdown: research support, $1,304,744; investigators' salaries (Bocking, Challis, Han, Olson, Richardson) (5.0 person-years)* **1990-91 EP Apr 90–Mar 91**	$ 1,441,400/89-90 1,304,744/90-91	2277	**LABRIE, FERNAND** **GOVINDAN, MANJAPRA V.** **BELANGER, ALAIN** **PELLETIER, GEORGES** **LUU THE, VAN** **SIMARD, JACQUES** **LIN, SHENG-XIANG** *Physiologie, Laval* Endocrinologie moléculaire *1990-91 ventilation des dépenses: aide à la recherche, $1,040,839; salaires des chercheurs (Labrie et Pelletier d'avril 1990; Luu The de juillet 1990) (2.75 années-personnes)* **1990-91 EP avr 90–mar 91**	$ 8,824,309/73-89 855,056/89-90 1,040,839/90-91
2275	**CHRETIEN, MICHEL** **KUCHEL, OTTO** **GARCIA, RAUL** **HAMET, PAVEL** **DE LEAN, ANDRE** **THIBAULT, GAETAN** *Institut de recherches cliniques de Montréal* Hypertension *1990-91 ventilation des dépenses: aide à la recherche, $674,555 (d'avril 1990 à mars 1991 pour Dr Garcia, Dr Kuchel et Dr Thibault, et d'avril 1990 à juin 1990 pour Dr De Léan et Dr Hamet); salaire du Dr De Léan d'avril 1990 à juin 1990 (0.25 année-personne)*	$ 10,818,299/72-89 960,324/89-90 674,555/90-91	2278	**LAMARRE, YVES** *Physiologie, Montréal* **LUND, JAMES P.** *Médecine dentaire, Montréal* **KALASKA, JOHN F.** *Physiologie, Montréal* **SMITH, ALLAN M.** *Physiologie, Montréal* **ROSSIGNOL, SERGE** *Physiologie, Montréal* Sciences neurologiques *1990-91 ventilation des dépenses: aide à la recherche, $629,023; salaires des chercheurs (Kalaska, Lamarre, Lund, Rossignol, Smith) (5.0 années-personnes)* **1990-91 EP avr 90–mar 91**	$ 7,580,738/67-89 570,684/89-90 629,023/90-91
2276	**KAY, CYRIL M.** **HODGES, ROBERT S.** **HOLMES, CHARLES F.B.** **SYKES, BRIAN D.** **SMILLIE, LAWRENCE B.** **JAMES, MICHAEL N.G.** **DEREWENDA, ZYGMUNT S.** *Biochemistry, Alberta* Protein structure and function *1990-91 expenditure breakdown: research support, $1,739,175; equipment, $351,600; investigators' salaries (Hodges, Smillie, and Sykes from April 1990, and Derewenda and Holmes from January 1991) (3.5 person-years)* **1990-91 EP Apr 90–Mar 91**	$ 14,286,414/74-89 2,735,318/89-90 2,090,775/90-91	2279	**SANCHE, LEON** **HUNTING, DAREL J.** **VAN LIER, JOHANNES E.** **JAY-GERIN, JEAN-PAUL** *Médecine nucléaire et radiobiologie, Sherbrooke* Sciences des radiations: aspects fondamentaux et biomédicaux *1990-91 ventilation des dépenses: aide à la recherche, $583,263; salaires des chercheurs (Jay-Gerin, Sanche, van Lier) (3.0 années-personnes)* **1990-91 EP avr 90–mar 91**	$ 3,051,555/82-89 577,652/89-90 583,263/90-91
			2280	**SCRIVER, CHARLES R.** **FRASER, F. CLARKE** **TENENHOUSE, HARRIET S.** **ROSENBLATT, DAVID S.** **ROSEN, RIMA** **PINSKY, LEONARD** *Pediatrics, McGill* Medical genetics *1990-91 expenditure breakdown: research support, $1,020,240; investigators' salaries (Rosen (from July 1990), Rosenblatt, Scriver, Tenenhouse) (3.75 person-years)* **1990-91 EP Apr 90–Mar 91**	$ 9,040,987/72-89 1,010,430/89-90 1,020,240/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2281	**SEHON, ALEC H.** **KEPRON, M. WAYNE** **HAYGLASS, KENT T.** **FROESE, ARNOLD** **KISIL, FRED T.** ***Immunology, Manitoba*** Allergy research *1990-91 expenditure breakdown: research support, $1,229,377; investigator's salary (HayGlass) (1.0 person-year)* **1990-91 EP Apr 90–Mar 91**	$ 11,550,970/73-89 1,175,377/89-90 1,229,377/90-91
2282	**SILVERMAN, MELVIN** **SKORECKI, KARL L.** **WHITESIDE, CATHARINE I.** **REITHMEIER, REINHART A.F.** ***Medicine, Toronto*** Membrane biology *1990-91 expenditure breakdown: research support, $686,400; investigators' salaries (Reithmeier, Skorecki) (2.0 person-years)* **1990-91 EP Apr 90–Mar 91**	$ 1,270,000/87-89 679,800/89-90 686,400/90-91
2283	**SODEK, JAROSLAV** **AUBIN, JANE E.** **HEERSCHE, JOHANNES N.M.** **FERRIER, JACK M.** **WAYE, MARY M.Y.** ***Dentistry, Toronto*** Periodontal physiology *1990-91 expenditure breakdown: research support, $890,000; investigators' salaries (Aubin, Ferrier, Heersche, Sodek, Waye) (5.0 person-years)* **1990-91 EP Apr 90–Mar 91**	$ 8,950,303/73-89 890,000/89-90 890,000/90-91

Program Grants/Subventions de programme commun de recherche

Total value/valeur totale: $11,840,991 1990-91

List No.	Grant/Award	Financial History
2284	**AXELSON, JAMES E.** ***Pharmaceutical Sciences, British Columbia*** **FARRELL, KEVIN** ***Pediatrics, British Columbia*** **ABBOTT, FRANK S.** ***Pharmaceutical Sciences, British Columbia*** **RURAK, DANNY W.** ***Obstetrics and Gynecology, British Columbia*** **RIGGS, K. WAYNE** ***Pharmaceutical Sciences, British Columbia*** The kinetics, effects and toxicology of drugs during pregnancy, the newborn period and childhood **1990-91 EP Oct 90–Mar 91** *PG-11120*	$ 222,003/90-91

N° de liste	Subvention/Bourse	Résumé financier
2285	**CALNE, DONALD B.** ***Medicine, British Columbia*** **MENEILLY, GRAYDON S.** ***Medicine, British Columbia*** **AMMANN, WALTER** ***Radiology, British Columbia*** **HOLDEN, JAMES E.** ***Radiology, Wisconsin*** **KIM, SEUNG U.** ***Medicine, British Columbia*** **PALMER, MATTHEW R.** ***Medicine, British Columbia*** **KRIEGER, CHARLES** ***Medicine, British Columbia*** **GRAF, PETER** ***Psychology, British Columbia*** **HAYDEN, MICHAEL R.** ***Medical Genetics, British Columbia*** **ADAM, MICHAEL J.** ***TRIUMF, British Columbia*** **MCGEER, EDITH G.** ***Psychiatry, British Columbia*** **SCHULZER, MICHAEL** ***Medicine, British Columbia*** **PATE, BRIAN D.** ***Medicine, British Columbia*** **TSUI, JOSEPH K.-C.** ***Medicine, British Columbia*** **CLARK, CAMPBELL M.** ***Psychiatry, British Columbia*** **BERRY, KENNETH** ***Pathology, British Columbia*** **MARTIN, W.R. WAYNE** ***Medicine, Alberta*** **EISEN, ANDREW A.** ***Medicine, British Columbia*** **RUTH, THOMAS J.** ***TRIUMF, British Columbia*** Degenerative disorders of the motor pathways **1990-91 EP Jul 90–Mar 91** *PG-11127*	$ 691,813/90-91
2286	**CHAPDELAINE, ALCIDE** ***Médecine, Montréal*** **ROBERTS, KENNETH D.** ***Biochimie, Montréal*** **BLEAU, GILLES** ***Obstétrique et gynécologie, Montréal*** **CHEVALIER, SIMONE** ***Médecine, Montréal*** Studies on the male and female reproductive systems **1990-91 EP avr 90–mar 91** *PG-14*	$ 3,207,361/79-89 329,545/89-90 329,545/90-91
2287	**CHRISTOU, NICOLAS V.** **GORDON, JULIUS** **MEAKINS, JONATHAN L.** **NOHR, CARL W.** ***Surgery, McGill*** Studies in altered host resistance to infection in surgery and trauma **1990-91 EP Apr 90–Mar 91** *PG-11126*	$ 1,010,155/84-89 259,560/89-90 312,551/90-91

List No.	Grant/Award	Financial History
2288	**COOK, HAROLD W.** *Pediatrics, Dalhousie* **SPENCE, MATTHEW W.** *Pediatrics, Dalhousie* **BYERS, DAVID M.** *Pediatrics, Dalhousie* **PALMER, FREDERICK B.ST.C.** *Biochemistry, Dalhousie* Membrane metabolism in health and disease **1990-91 EP Apr 90–Mar 91** *PG-16*	$ 2,055,245/80-89 509,955/89-90 479,872/90-91
2289	**CRINE, PHILIPPE J.** **BOILEAU, GUY** **DESGROSEILLERS, LUC** *Biochimie, Montréal* Molecular biology of brain peptidergic systems **1990-91 EP avr 90–mar 91** *PG-49*	$ 280,514/89-90 266,687/90-91
2290	**CYNADER, MAX S.** *Ophthalmology, British Columbia* **LEPORE, FRANCO** *Psychologie, Montréal* **SHAW, CHRISTOPHER** *Ophthalmology, British Columbia* **MITCHELL, DONALD E.** *Psychology, Dalhousie* Neural mechanisms underlying amblyopia and strabismus **1990-91 EP Apr 90–Mar 91** *PG-29*	$ 1,477,059/84-89 300,656/89-90 300,656/90-91
2291	**DANIEL, EDWIN E.** *Biomedical Sciences, McMaster* **HUIZINGA, JAN D.** *Biomedical Sciences, McMaster* **MCDONALD, THOMAS J.** *Medicine, Western Ontario* **DIAMANT, NICHOLAS E.** *Medicine, Toronto* **FOX, JO-ANN E.T.** *Nursing, McMaster* Control of gastrointestinal and other smooth muscles in health and disease **1990-91 EP Apr 90–Mar 91** *PG-8*	$ 3,396,294/77-89 618,852/89-90 590,404/90-91
2292	**DE LEAN, ANDRE** *Pharmacologie, Montréal* **NEMER, MONA** *Médecine, Montréal* **DROUIN, JACQUES** *Biochimie, Montréal* **ONG, HUY** *Pharmacie, Montréal* Molecular biology and pharmacology of cardiac hormones **1990-91 EP oct 90–mar 91** *PG-11116*	$ 224,930/90-91
2293	**FIBIGER, H. CHRISTIAN** *Psychiatry, British Columbia* **BLAHA, CHARLES D.** *Psychiatry, British Columbia* **PHILLIPS, ANTHONY G.** *Psychology, British Columbia* The neurobiology of central dopamine systems in normal and pathological behaviour **1990-91 EP Apr 90–Mar 91** *PG-23*	$ 2,229,052/82-89 370,860/89-90 370,860/90-91
2294	**FINLAY, J. BRYAN** *Surgery, Western Ontario* **SMITH, DENNIS C.** *Dentistry, Toronto* **LAUPACIS, ANDREAS** *Medicine, Western Ontario* **RORABECK, CECIL H.** *Surgery, Western Ontario* **BOURNE, ROBERT B.** *Surgery, Western Ontario* Clinical and mechanical studies of total joints and fracture fixation **1990-91 EP Apr 90–Mar 91** *PG-40*	$ 300,900/87-89 170,730/89-90 145,535/90-91
2295	**GUTTMANN, RONALD D.** *Medicine, McGill* **COLLE, ELEANOR** *Pediatrics, McGill* **FUKS, ABRAHAM** *Medicine, McGill* **PRUD'HOMME, GERALD J.** *Pathology, McGill* Immunogenetic factors, autoaggressive T cells, target antigens and immunoregulation in autoimmune diabetes and transplantation **1990-91 EP Oct 90–Mar 91** *PG-11119*	$ 183,925/90-91
2296	**GUTTMANN, RONALD D.** *Medicine, McGill* **FUKS, ABRAHAM** *Medicine, McGill* **COLLE, ELEANOR** *Pediatrics, McGill* **PRUD'HOMME, GERALD J.** *Pathology, McGill* The major histocompatibility complex, immunogenetic interactions, and cell-mediated immunity in autoimmune diabetes mellitus and transplantation immunology **1990-91 EP Apr 90–Sep 90** *PG-25*	$ 2,049,258/83-89 373,115/89-90 186,556/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2297	**HAKIM, ANTOINE M.** **GJEDDE, ALBERT H.** **THOMPSON, CHRISTOPHER J.** **ALIVISATOS, BESSIE** **TYLER, JANE L.** **WOLFE, LEONHARD S.** **MILNER, BRENDA A.** **DIKSIC, MIRKO** **ZATORRE, ROBERT J.** **EVANS, ALAN C.** **PETRIDES, MICHAEL** **SHERWIN, ALLAN L.** **YAMAMOTO, Y. LUCAS** **LEBLANC, RICHARD** **GAUTHIER, SERGE G.** *Neurology and Neurosurgery, McGill* Neurological studies by positron emission tomography **1990-91 EP Apr 90–Jun 90** *PG-41*	$ 1,525,000/87-89 300,000/89-90 75,000/90-91
2298	**HUET, P.-MICHEL** *Médecine, Montréal* **POMIER-LAYRARGUES, GILLES** *Médecine, Montréal* **GASCON-BARRE, MARIELLE** *Pharmacologie, Montréal* **BUTTERWORTH, ROGER F.** *Médecine, Montréal* **VILLENEUVE, JEAN-PIERRE** *Médecine, Montréal* Physiologie et physiopathologie hépatique **1990-91 EP avr 90–sep 90** *PG-3*	$ 2,758,165/76-89 309,683/89-90 154,840/90-91
2299	**HUET, P.-MICHEL** *Médecine, Montréal* **GASCON-BARRE, MARIELLE** *Pharmacologie, Montréal* **VILLENEUVE, JEAN-PIERRE** *Médecine, Montréal* Physiologie et physiopathologie hépatique *1990-91 ventilation des dépenses: aide à la recherche, $179,374; appareils, $10,000* **1990-91 EP oct 90–mar 91** *PG-11118*	$ 189,374/90-91
2300	**JONES, DEREK W.** *Dentistry, Dalhousie* **HOWELL, ROBIN E.** *Dentistry, Dalhousie* **HARSANYI, BARBARA B.** *Dentistry, Dalhousie* **KWAK, JAN C.T.** *Chemistry, Dalhousie* **GRAHAM, BRUCE S.** *Dentistry, Dalhousie* **SUTOW, ELLIOTT J.** *Dentistry, Dalhousie* **MEZEI, MICHAEL** *Pharmacy, Dalhousie* Synthesis, evaluation, application and biological testing of biomaterials **1990-91 EP Apr 90–Mar 91** *PG-45*	$ 203,493/88-89 226,266/89-90 226,266/90-91
2301	**KARMALI, MOHAMED A.** *Microbiology, Toronto* **PETRIC, MARTIN** *Microbiology, Toronto* **RICHARDSON, SUSAN E.** *Microbiology, Toronto* **BRUNTON, JAMES L.** *Medicine, Toronto* **LINGWOOD, CLIFFORD A.** *Clinical Biochemistry, Toronto* Pathogenesis of verotoxin-producing E. coli infection **1990-91 EP Apr 90–Mar 91** *PG-11123*	$ 338,750/87-89 190,550/89-90 287,153/90-91
2302	**LECOURS, ANDRE R.** *Médecine, Montréal* **JOANETTE, YVES** *Orthophonie et audiologie, Montréal* **NESPOULOUS, JEAN-LUC** *Linguistique et philologie, Montréal* **PERETZ, ISABELLE** *Psychologie, Montréal* **KELLER, ERIC** *Linguistique, Québec à Montréal* **BUB, DANIEL N.** *Neurologie et neurochirurgie, McGill* **RYALLS, JOHN H.** *Orthophonie et audiologie, Montréal* Aspects neuropsychologiques de l'âge avancé **1990-91 EP avr 90–mar 91** *PG-28*	$ 1,607,960/83-89 296,625/89-90 302,000/90-91
2303	**LYE, STEPHEN J.** *Obstetrics and Gynecology, Toronto* **ADAMSON, S. LEE** *Obstetrics and Gynecology, Toronto* **MORROW, ROBERT J.** *Obstetrics and Gynecology, Toronto* **LANGILLE, B. LOWELL** *Pathology, Toronto* **FEDORKO, LUDWIK M.** *Pediatrics, Toronto* **MACLUSKY, NEIL J.** *Obstetrics and Gynecology, Toronto* **RITCHIE, J.W. KNOX** *Obstetrics and Gynecology, Toronto* Birth and perinatal development **1990-91 EP Oct 90–Mar 91** *PG-11115*	$ 418,077/90-91
2304	**MARCEL, YVES L.** *Médecine, Montréal* **RASSART, ERIC** *Sciences biologiques, Québec à Montréal* **MILNE, ROSS W.** *Médecine, Montréal* Structure and function of human apolipoproteins **1990-91 EP avr 90–mar 91** *PG-27*	$ 1,361,265/83-89 489,981/89-90 401,858/90-91

List No.	Grant/Award	Financial History
2305	**MCGEER, PATRICK L.** *Psychiatry, British Columbia* **O'KUSKY, JOHN R.** *Pathology, British Columbia* **BEATTIE, B. LYNN** *Medicine, British Columbia* **MCGEER, EDITH G.** *Psychiatry, British Columbia* Investigations on Alzheimer's disease **1990-91 EP Apr 90–Jun 90** *PG-33*	$ 1,054,534/85-89 280,908/89-90 70,227/90-91
2306	**MIDHA, KAMAL K.** *Pharmacy, Saskatchewan* **KORCHINSKI, ELARIEN D.** *Family Medicine, Saskatchewan* **HUBBARD, JOHN W.** *Pharmacy, Saskatchewan* **MCKAY, GORDON G.** *Pharmacy, Saskatchewan* **HAWES, EDWARD M.** *Pharmacy, Saskatchewan* Investigations towards more efficacious use of psychotropic drugs **1990-91 EP Apr 90–Mar 91** *PG-34*	$ 1,556,040/85-89 300,000/89-90 300,000/90-91
2307	**MURPHY, RICHARD A.** **CAMPENOT, ROBERT B.** **MILLER, FREDA D.** **SMITH, RICHARD S.** **ACHESON, ANN L.** *Anatomy and Cell Biology, Alberta* Neuronal growth control: cellular and molecular mechanisms **1990-91 EP Apr 90–Mar 91** *PG-46*	$ 356,650/89-90 472,649/90-91
2308	**PILLIAR, ROBERT M.** **DEPORTER, DOUGLAS A.** **DAVIES, JOHN E.** **PHAROAH, MICHAEL J.** **SMITH, DENNIS C.** **WATSON, PHILIP A.** *Dentistry, Toronto* Study of the requirements for a succesaful dental implant **1990-91 EP Apr 90–Mar 91** *PG-26*	$ 2,484,399/83-89 422,010/89-90 358,709/90-91
2309	**PODESTA, RONALD B.** *Zoology, Western Ontario* **CLARKE, MICHAEL W.** *Microbiology and Immunology, Western Ontario* **DEKABAN, GREGORY A.** *Microbiology and Immunology, Western Ontario* **STREJAN, GILL H.** *Microbiology and Immunology, Western Ontario* Experimental molecular vaccines for schistosomiasis **1990-91 EP Oct 90–Mar 91** *PG-11117*	$ 141,955/90-91
2310	**RAUTAHARJU, PENTTI M.** *Physiology and Biophysics, Dalhousie* **MONTAGUE, TERRENCE J.** *Medicine, Alberta* **MCDONALD, TERENCE F.** *Physiology and Biophysics, Dalhousie* **KHOLOPOV, ALEXANDER** *Physiology and Biophysics, Dalhousie* **STROINK, GERHARD** *Physics, Dalhousie* **GARDNER, MARTIN J.** *Medicine, Dalhousie* **WOLF, HERMANN K.** *Physiology and Biophysics, Dalhousie* **WONG, ALAN Y.K.** *Physiology and Biophysics, Dalhousie* **BUSTAMANTE, J. OMAR** *Physiology and Biophysics, Dalhousie* Electrocardiological determinants of ischemic heart disease **1990-91 EP Apr 90–Jun 90** *PG-30*	$ 1,498,190/84-89 319,628/89-90 79,907/90-91
2311	**ROBERGE, FERNAND A.** *Génie biomédical, Montréal* **LEBLANC, A.-ROBERT** *Génie biomédical, Montréal* **PAGE, PIERRE L.** *Chirurgie, Montréal* **GUARDO, ROBERT** *Génie biomédical, Montréal* **GULRAJANI, RAMESH M.** *Génie biomédical, Montréal* **SHENASA, MOHAMMAD** *Médecine, Montréal* **NADEAU, REGINALD A.** *Médecine, Montréal* **SAVARD, PIERRE** *Génie biomédical, Montréal* **CARDINAL, RENE** *Pharmacologie, Montréal* Experimental and theoretical studies on cardiac electrophysiology **1990-91 EP avr 90–mar 91** *PG-12*	$ 3,194,272/79-89 493,900/89-90 493,900/90-91
2312	**RODER, JOHN C.** *Immunology, Toronto* **ROACH, ARTHUR H.** *Medical Genetics, Toronto* **MOSCARELLO, MARIO A.** *Biochemistry, Toronto* Molecular basis of myelination **1990-91 EP Apr 90–Mar 91** *PG-11124*	$ 655,515/87-89 385,817/89-90 478,723/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2313	**SEEMAN, PHILIP** *Pharmacology, Toronto* **NIZNIK, HYMAN B.** *Psychiatry, Toronto* **O'DOWD, BRIAN F.** *Pharmacology, Toronto* **VAN TOL, HUBERT H.M.** *Pharmacology, Toronto* **GEORGE, SUSAN R.** *Medicine, Toronto* Receptors and transporters for dopamine in brain psychomotor disease **1990-91 EP Oct 90–Mar 91** *PG-11121*	$ 208,000/90-91
2314	**SEIDAH, NABIL G.** **CHRETIEN, MICHEL** **MBIKAY, MAJAMBU** **LAZURE, CLAUDE** *Institut de recherches cliniques de Montréal* Diversity and expression of neural, endocrine and secretory proteins **1990-91 EP avr 90–mar 91** *PG-2*	$ 3,958,010/76-89 539,609/89-90 539,609/90-91
2315	**SMITH, BARRY T.S.** *Pediatrics, Toronto* **POST, MARTIN** *Pediatrics, Toronto* **CUTZ, ERNEST** *Pathology, Toronto* **O'BRODOVICH, HUGH M.** *Pediatrics, Toronto* Growth, differentiation, and adaptation of the fetal and neonatal lung **1990-91 EP Apr 90–Mar 91** *PG-42*	$ 344,484/88-89 453,578/89-90 453,578/90-91
2316	**ST-PIERRE, SERGE A.** *INRS (Montréal)* **JOLICOEUR, FRANCOIS B.** *Psychiatrie, Sherbrooke* **QUIRION, REMI** *Psychiatrie, McGill* **FOURNIER, ALAIN** *INRS (Montréal)* **CADIEUX, ALAIN** *Pharmacologie, Sherbrooke* Etudes structurales et fonctionnelles des neuropeptides régulateurs **1990-91 EP avr 90–mar 91** *PG-11125*	$ 442,884/87-89 196,506/89-90 294,412/90-91
2317	**STANNERS, CLIFFORD P.** *Biochemistry, McGill* **FUKS, ABRAHAM** *Medicine, McGill* **BEAUCHEMIN, NICOLE** *Biochemistry, McGill* Molecular biology of cell surface antigens involved in human cancer **1990-91 EP Apr 90–Mar 91** *PG-43*	$ 192,733/88-89 180,311/89-90 180,311/90-91
2318	**STEIN, RICHARD B.** *Physiology, Alberta* **GORDON, TESSA** *Pharmacology, Alberta* **PEARSON, KEIR G.** *Physiology, Alberta* **MARTIN, THOMAS P.** *Physical Therapy, Alberta* **POPOVIC, DEJAN B.** *Physiology, Alberta* **PROCHAZKA, ARTHUR** *Physiology, Alberta* Motor control and rehabilitation neuroscience **1990-91 EP Apr 90–Mar 91** *PG-47*	$ 455,828/89-90 535,208/90-91
2319	**TANGUAY, ROBERT M.** **DUSSAULT, JEAN H.** **VINCENT, MICHEL** *Médecine, Laval* Ontogenèse et génétique moléculaire **1990-91 EP avr 90–jui 90** *PG-35*	$ 741,944/86-89 263,060/89-90 65,765/90-91
2320	**TRIFARO, JOSE M.** *Pharmacology, Ottawa* **LEMAIRE, SIMON** *Pharmacology, Ottawa* **BOKSA, PATRICIA J.** *Psychiatry, McGill* Studies on neurohormone synthesis and secretion in cells of neural crest origin using chromaffin cells as a model system *1990-91 expenditure breakdown: research support of $72,959 for Drs. Boksa, Lemaire, and Trifaro from April 1990 to June 1990, and of $36,000 for only Dr. Boksa from July 1990 to March 1991* *PG-20*	$ 1,727,624/81-89 289,031/89-90 108,959/90-91
2321	**WEVERS, HENDRIK W.** *Mechanical Engineering, Queen's* **RUDAN, JOHN F.** *Surgery, Queen's* **OLNEY, SANDRA J.** *Rehabilitation Therapy, Queen's* **COOKE, T. DEREK V.** *Surgery, Queen's* **BRYANT, J. TIMOTHY** *Mechanical Engineering, Queen's* **SORBIE, CHARLES** *Surgery, Queen's* **WYSS, URS P.** *Rehabilitation Therapy, Queen's* **PATER, JOSEPH L.** *Community Health and Epidemiology, Queen's* The biomechanical basis for osteoarthritis and prosthetic knee design **1990-91 EP Apr 90–Mar 91** *PG-48*	$ 166,985/89-90 200,180/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2322 **WYSE, D. GEORGE** — $ 459,821/88-89
Medicine, Calgary — 478,994/89-90
DUFF, HENRY J. — 478,994/90-91
Medicine, Calgary
MITCHELL, L. BRENT
Medicine, Calgary
GILES, WAYNE R.
Medical Physiology, Calgary
GILLIS, ANNE M.
Medicine, Calgary
Cardiovascular electrophysiology
1990-91 EP Apr 90–Mar 91
PG-44

Networks of Centres of Excellence/Réseaux de centres d'excellence

Total value/valeur totale: $19,907,786 1990-91.

2323 **AGUAYO, ALBERT J.** — $ 100,000/89-90
Medicine, McGill — 6,298,951/90-91
LAMARRE, YVES
Physiologie, Montréal
Canadian network for neural regeneration and functional recovery
1990-91 EP Jul 90–Mar 91

2324 **HANCOCK, ROBERT E.W.** — $ 50,000/89-90
Microbiology, British Columbia — 2,231,500/90-91
Canadian bacterial diseases network
1990-91 expenditure breakdown: additional support for this network will be provided by the Natural Sciences and Engineering Research Council of Canada (Ottawa)
1990-91 EP Apr 90–Mar 91

2325 **HAYDEN, MICHAEL R.** — $ 100,000/89-90
Medical Genetics, British Columbia — 3,712,512/90-91
Genetic basis of human diseases network
1990-91 EP Aug 90–Mar 91

2326 **MACKLEM, PETER T.** — $ 100,000/89-90
Medicine, McGill — 3,617,803/90-91
Respiratory health network
1990-91 EP May 90–Mar 91

2327 **MARSHALL, VICTOR W.** — $ 33,000/90-91
Behavioural Science, Toronto
Canadian aging research network
1990-91 expenditure breakdown: additional support for this network will be provided by the Social Sciences and Humanities Research Council of Canada, the Natural Sciences and Engineering Research Council of Canada, and Health and Welfare Canada
1990-91 EP Sep 90–Mar 91

2328 **SMITH, MICHAEL** — $ 50,000/89-90
Biochemistry, British Columbia — 4,014,000/90-91
Protein engineering network
1990-91 expenditure breakdown: additional support for this network will be provided by the Natural Sciences and Engineering Research Council of Canada (Ottawa)
1990-91 EP Jul 90–Mar 91

Special Projects/Projets spéciaux

Total value/valeur totale: $1,548,248 1990-91.

2329 **EISEN, ANDREW A.** — $ 1,838,738/82-89
Medicine, British Columbia — 293,708/89-90
ADAM, MICHAEL J. — 73,427/90-91
TRIUMF, British Columbia
HAYDEN, MICHAEL R.
Medical Genetics, British Columbia
MCGEER, EDITH G.
Psychiatry, British Columbia
CLARK, CAMPBELL M.
Psychiatry, British Columbia
MARTIN, W.R. WAYNE
Medicine, British Columbia
GROCHOWSKI, EDWARD W.
TRIUMF, British Columbia
MCGEER, PATRICK L.
Psychiatry, British Columbia
PATE, BRIAN D.
Medicine, British Columbia
RUTH, THOMAS J.
TRIUMF, British Columbia
AMMANN, WALTER
Radiology, British Columbia
CALNE, DONALD B.
Medicine, British Columbia
HARROP, RONALD
Mathematics, Simon Fraser
Positron emission tomography and its application in brain research
1990-91 EP Apr 90–Jun 90
SP-7

2330 **FRIESEN, HENRY G.** — $ 2,782,767/66-89
Physiology, Manitoba — 140,000/89-90
Human pituitary research program — 157,315/90-91
1990-91 EP Apr 90–Mar 91
MT-2525

2331 **GAUVREAU, DENIS** — $ 74,415/89-90
INRS (Montréal) — 101,720/90-91
LACOSTE-ROYAL, GINETTE
INRS (Montréal)
NALBANTOGLU, JOSEPHINE
Médecine, McGill
Maintenance and development of a registry on Alzheimer cases, and research support for the IMAGE project: a study on the molecular genetics of Alzheimer's disease in Saguenay-Lac-Saint-Jean
1990-91 ventilation des dépenses: aide à la recherche, $46,220; aide au registre, $55,000
1990-91 EP avr 90–mar 91
SP-26

2332 **GJEDDE, ALBERT H.** — $ 410,498/90-91
Neurology and Neurosurgery, McGill
Positron imaging of neural systems
1990-91 expenditure breakdown: research support, $361,747; maintenance, $48,751
1990-91 EP Jul 90–Mar 91
SP-30

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2333 **JOLICOEUR, PAUL** — $ 19,166/90-91
Institut de recherches cliniques de Montréal
Salaire d'un stagiaire postdoctoral pour travailler sur les problèmes neurologiques induits lors du SIDA
1990-91 EP jlt 90–mar 91
SP-28

2334 **KANG, C. YONG** — $ 69,000/90-91
Microbiology and Immunology, Ottawa
Development of a candidate vaccine against AIDS
1990-91 EP Jul 90–Mar 91
SP-29

2335 **PLUMMER, FRANCIS A.** — $ 332,416/89-90
Medical Microbiology, Manitoba 477,600/90-91
RONALD, ALLAN R.
Medicine, Manitoba
MCCLARTY, GRANT A.
Medical Microbiology, Manitoba
BRUNHAM, ROBERT C.
Medical Microbiology, Manitoba
DIAZ-MITOMA, FRANCISCO J.
Medical Microbiology, Manitoba
Studies of human immunodeficiency virus and other sexually transmitted diseases
1990-91 EP Apr 90–Mar 91
SP-27

2336 **TAYLOR, D. WAYNE** — $ 29,200/90-91
Clinical Epidemiology and Biostatistics, McMaster
Support for a research assistant for the North American symptomatic carotid endarterectomy trial
1990-91 EP Jul 90–Mar 91
SP-31

2337 **WATT, DOUGLAS G.D.** — $ 735,226/83-89
Physiology, McGill 167,000/89-90
167,000/90-91
Space experiments program of the Aerospace Medical Research Unit, McGill University
1990-91 EP Apr 90–Mar 91
SP-10

2338 **WING, PETER C.** — $ 211,227/86-87
Surgery, British Columbia 54,557/87-88
TSANG, IAN K.Y. 43,322/90-91
Medicine, British Columbia
Assessment of back pain in astronauts
SP-19

Medical Education Grants/Subventions en éducation médicale

Total value/valeur totale: $107,414 1990-91.

2339 **BORDAGE, GEORGES** — $ 31,673/90-91
Médecine sociale et préventive, Laval
PAGE, GORDON G.
Medicine, British Columbia
Assessment of clinical decision-making skills on the Medical Council of Canada's qualifying examination: Q4 project, pilot test III
1990-91 ventilation des dépenses: le Conseil médical du Canada (Ottawa) accordera un appui supplémentaire pour ce projet
1990-91 EP oct 90–mar 91

2340 **BORDAGE, GEORGES** — $ 40,000/88-89
Médecine sociale et préventive, Laval 40,000/89-90
24,000/90-91
Analyse sémantique des démarches diagnostiques d'étudiants avec et sans difficulté d'apprentissage du raisonnement clinique en médecine
1990-91 EP avr 90–déc 90

2341 **PATEL, VIMLA L.** — $ 30,000/88-89
Medicine, McGill 40,000/89-90
Biomedical knowledge and clinical reasoning 40,000/90-91
1990-91 EP Apr 90–Mar 91

2342 **PRESTWICH, PATRICIA E.** — $ 11,741/90-91
History, Alberta
Treating mental illness in 19th century Paris: the case of Sainte-Anne, 1867-1914
1990-91 EP Apr 90–Mar 91

University-Industry Collaborative Research Program/Programme de recherches en équipe université-industrie

Total value (MRC only)/valeur totale (CRM seulement): $4,824,728 1990-91.

2343 **ARSENAULT, ANDRE** — $ 176,850/88-89
Institut de cardiologie de Montréal 183,375/89-90
ROCHON, FERNANDE D. 85,024/90-91
Chimie, Québec à Montréal
THEROUX, PIERRE
Médecine, Montréal
GAGNON, DANIEL
Institut de cardiologie de Montréal
GREGOIRE, JEAN
Institut de cardiologie de Montréal
Recherche et développement multidisciplinaire en cardiologie nucléaire

List No.	Grant/Award	Financial History
2344	**AUBIN, JANE E.** **SODEK, JAROSLAV** **WAYE, MARY M.Y.** **HEERSCHE, JOHANNES N.M.** *Dentistry, Toronto* Studies of osteoblast-specific genes and osteoblast-derived resorbing factors: effects of glucocorticoids on expression of bone-specific genes during differentiation *1990-91 expenditure breakdown: additional support for this project will be provided by Ciba-Geigy Canada Ltd. of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 37,500/89-90 50,000/90-91
2345	**BARKUN, ALAN N.G.** *Medicine, McGill* **MEAKINS, JONATHAN L.** *Surgery, McGill* **SAMPALIS, JOHN S.** *Epidemiology and Biostatistics, McGill* **HINCHEY, E. JOHN** *Surgery, McGill* **SIGMAN, HARVEY H.** *Surgery, McGill* **FRIED, GERALD M.** *Surgery, McGill* **MAMAZZA, JOSEPH** *Surgery, McGill* **GORESKY, CARL A.** *Medicine, McGill* **WEXLER, MARVIN J.** *Surgery, McGill* Laparoscopic versus conventional cholecystectomy: a randomized clinical trial *1990-91 expenditure breakdown: additional support for this project will be provided by Ethicon Ltd. of Peterborough* **1990-91 EP Jan 91–Mar 91**	$ 3,030/90-91
2346	**BENDAYAN, MOISE** *Anatomie, Montréal* Zeiss electron microscope EM-902 and maintenance *1990-91 ventilation des dépenses: Carl Zeiss Canada Ltée de Don Mills, Ontario, accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 359,334/89-90 36,960/90-91
2347	**BERNSTEIN, ALAN** *Medical Genetics, Toronto* **DAVIES, R. WAYNE** *Allelix Inc. (Mississauga)* **JOSHI-SUKHWAL, SADHNA** *Allelix Inc. (Mississauga)* Viral inhibition therapy against AIDS *1990-91 expenditure breakdown: additional support for this project will be provided by Allelix Inc.* **1990-91 EP Apr 90–Mar 91**	$ 106,667/87-89 82,400/89-90 83,200/90-91
2348	**BEVERIDGE, TERRANCE J.** *Microbiology, Guelph* Use of electron microscopy and heavy metal-penicillin to study antibiotic penetration and location of penicillin binding proteins in bacteria *1990-91 expenditure breakdown: research support, $14,500; equipment, $3,000 (additional support for this project will be provided by Eli Lilly Canada Inc. of Scarborough, Ontario)* **1990-91 EP Oct 90–Mar 91**	$ 17,500/90-91
2349	**BORGEAT, PIERRE** *Physiologie, Laval* **NACCACHE, PAUL H.** *Médecine, Laval* Biochemical and pharmacological studies on novel inhibitors of leukotriene synthesis *1990-91 ventilation des dépenses: Merck Frosst Canada Inc. de Montréal accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 87,000/88-89 45,000/89-90 45,000/90-91
2350	**BUCHANAN, MICHAEL R.** *Pathology, McMaster* **BASTIDA, EVA** *Hospital Clinic i Provincial (Barcelona)* Lipoxygenase metabolites act as internal regulators of cell/cell adhesion *1990-91 expenditure breakdown: additional support for this project will be provided by Merck Frosst Canada Inc. (Montreal)* **1990-91 EP Apr 90–Mar 91**	$ 69,752/87-89 45,583/89-90 46,025/90-91
2351	**BUTTERWORTH, ROGER F.** **POMIER-LAYRARGUES, GILLES** *Médecine, Montréal* Studies of benzodiazepine receptors and their endogenous ligands in hepatic encephalopathy *1990-91 ventilation des dépenses: Hoffmann-La Roche Limitée d'Etobicoke accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 4,916/89-90 29,494/90-91
2352	**CAIRNS, JOHN A.** *Medicine, McMaster* **GENT, MICHAEL** *Clinical Epidemiology and Biostatistics, McMaster* **ROBERTS, ROBIN S.** *Clinical Epidemiology and Biostatistics, McMaster* **CONNOLLY, STUART J.** *Medicine, McMaster* Canadian amiodarone myocardial infarction arrhythmia trial *1990-91 expenditure breakdown: additional support for this project will be provided by Sanofi Canada, Inc., Québec* **1990-91 EP Apr 90–Mar 91**	$ 493,107/89-90 475,454/90-91
2353	**CHESSEX, PHILIPPE** *Pédiatrie, Montréal* Improving parenteral nutrition in the newborn infant *1990-91 ventilation des dépenses: Baxter Corporation de Mississauga accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 15,000/89-90 15,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2354	**CRINE, PHILIPPE J.** *Biochimie, Montréal* **BOILEAU, GUY** *Biochimie, Montréal* **LEMAY, GUY** *Microbiologie et immunologie, Montréal* Molecular exploration of the active site of neutral endopeptidase *1990-91 ventilation des dépenses: Schering-Plough Corporation de Bloomfield, New Jersey, accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 23,318/89-90 48,255/90-91
2355	**CROCKER, JOHN F.S.** *Pediatrics, Dalhousie* **OGBORN, MALCOLM R.** *Pediatrics and Child Health, Manitoba* **RENTON, KENNETH W.** *Pharmacology, Dalhousie* Cyclosporin A metabolism and interactions in children *1990-91 expenditure breakdown: additional support for this project will be provided by Sandoz Canada Inc. of Dorval, Québec* **1990-91 EP Apr 90–Mar 91**	$ 16,094/89-90 42,223/90-91
2356	**DAVIGNON, JEAN** *Médecine, Montréal* Genetic determinants of dyslipoproteinemia and atherosclerosis: search for new indicators of risk *1990-91 ventilation des dépenses: Ciba-Geigy Canada Ltée de Mississauga accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 328,023/88-89 415,497/89-90 384,140/90-91
2357	**DIAMANDIS, ELEFTHERIOS P.** *Clinical Biochemistry, Toronto* Ultrasensitive immunoassay using time-resolved fluorescence *1990-91 expenditure breakdown: additional support for this project will be provided by CyberFluor Inc. of Toronto* **1990-91 EP Apr 90–Mar 91**	$ 11,288/89-90 38,680/90-91
2358	**ESDAILE, JOHN M.** *Medicine, McGill* **SHIROKY, JEFFREY B.** *Medicine, McGill* **LAMPING, DONNA L.** *Epidemiology and Biostatistics, McGill* **SUISSA, SAMY** *Epidemiology and Biostatistics, McGill* Randomized double-blind double-observer placebo-controlled trial of hydroxychloroquine sulphate in early rheumatoid arthritis *1990-91 expenditure breakdown: additional support for this project will be provided by Sterling Drug Ltd. of Aurora, Ontario* **1990-91 EP Apr 90–Mar 91**	$ 30,779/89-90 26,092/90-91
2359	**FARRELL, KEVIN** *Pediatrics, British Columbia* **ABBOTT, FRANK S.** *Pharmaceutical Sciences, British Columbia* **JUNKER, ANNE K.** *Pediatrics, British Columbia* Mechanisms of valproate hepatotoxicity *1990-91 expenditure breakdown: additional support for this project will be provided by Abbott Laboratories, Limited, of Montreal* **1990-91 EP Apr 90–Sep 90**	$ 26,755/89-90 17,837/90-91
2360	**FEINE, JOCELYNE S.** **BRIEN, NORMAND** **LAMARCHE, CLAUDE** **DONOHUE, WILLIAM B.** **LUND, JAMES P.** **TACHE, RICHARD** **BOUDRIAS, PIERRE** *Médecine dentaire, Montréal* Within-subject trials of implant-supported dental prostheses *1990-91 ventilation des dépenses: Nobelpharma Canada Inc. de Willowdale, Ontario, et RAB Oral Ceramiques de St-Laurent, Québec, accorderont un appui supplémentaire pour ce projet* **1990-91 EP jan 91–mar 91**	$ 15,600/90-91
2361	**GAGNON, DANIEL** *Institut de cardiologie de Montréal* **TODD-POKROPEK, ANDREW** *Medical Physics, University College (London, England)* **ARSENAULT, ANDRE** *Institut de cardiologie de Montréal* **KLJEWSKI, MARIE F.** *Radiology, Harvard* Holospectral imaging: design specification for a new gamma camera *1990-91 ventilation des dépenses: Ultimage inc. d'Outremont, Québec, et Picker International de Cleveland, Ohio, accorderont un appui supplémentaire pour ce projet* **1990-91 EP jan 91–mar 91**	$ 31,159/90-91
2362	**GATI, WENDY P.** *Pharmacology, Alberta* **TYRRELL, DAVID L.J.** *Medical Microbiology and Infectious Diseases, Alberta* **JEWELL, LAURENCE D.** *Pathology, Alberta* Purine dideoxynucleosides with anti-hepatitis B activity: cellular pharmacology in human cells, pathology and toxicology in experimental duck hepatitis B *1990-91 expenditure breakdown: additional support for this project will be provided by Glaxo Canada Inc. of Toronto* **1990-91 EP Jan 91–Mar 91**	$ 26,008/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2363	**GOLTZMAN, DAVID** *Physiology, McGill* Characterization of the osteoblast receptor for parathyroid hormone *1990-91 expenditure breakdown: additional support for this project will be provided by the Glaxo Canada - Allelix joint bone venture (Mississauga)* **1990-91 EP Apr 90–Mar 91**	$ 103,826/89-90 93,670/90-91	2369	**HEATHCOTE, E. JENNY L.** *Medicine, Toronto* **NAYLOR, C. DAVID** *Medicine, Toronto* **READ, STANLEY E.** *Pediatrics, Toronto* **WANLESS, IAN R.** *Pathology, Toronto* **SHERMAN, MORRIS** *Medicine, Toronto* **VAS, STEPHEN I.** *Microbiology, Toronto* A randomized controlled trial of interferon therapy in chronic hepatitis B *1990-91 expenditure breakdown: additional support for this project will be provided by Pacific Pharmaceuticals Ltd. of Vancouver* **1990-91 EP Apr 90–Mar 91**	$ 58,633/89-90 58,633/90-91
2364	**GROSS, MICHAEL** *Surgery, Dalhousie* Multi-surgeon randomized study of cemented versus non-cemented hip prosthesis *1990-91 expenditure breakdown: additional support for this project will be provided by Howmedica (a division of Pfizer Hospital Products Ltd.), Guelph, and by Dow Corning Canada Inc., Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 37,700/89-90 42,000/90-91			
2365	**GUIDOIN, ROBERT G.** *Chirurgie, Laval* **ROY, PAUL-EMILE** *Pathologie, Laval* **DOUVILLE, YVAN** *Chirurgie, Laval* The satin weave polyester arterial graft with a polypropylene wrap: a breakthrough? *1990-91 ventilation des dépenses: Pramel Inc. de Longueuil accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–jlt 90**	$ 15,809/88-89 25,106/89-90 10,071/90-91	2370	**HEERSCHE, JOHANNES N.M.** **SODEK, JAROSLAV** **AUBIN, JANE E.** **FERRIER, JACK M.** **WAYE, MARY M.Y.** *Dentistry, Toronto* Studies of osteoblast-specific genes and osteoblast-derived resorbing factors: isolation and characterization of bone resorbing factors released by osteoblast-like cells *1990-91 expenditure breakdown: additional support for this project will be provided by Ciba-Geigy Canada Ltd. of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 37,500/89-90 50,000/90-91
2366	**GUIDOIN, ROBERT G.** **DOUVILLE, YVAN** **DOILLON, CHARLES J.** *Chirurgie, Laval* Albumin coating of polyester arterial grafts as an alternative to preclotting *1990-91 ventilation des dépenses: Bard Canada Inc. de Mississauga accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 26,610/89-90 26,610/90-91	2371	**HEISLER, SEYMOUR** *Medicine, McGill* **FORD-HUTCHINSON, ANTHONY W.** *Merck Frosst Canada Inc. (Montreal)* Pharmacological management of the electrolyte (sodium and chloride) transport dysfunction in cystic fibrosis *1990-91 expenditure breakdown: additional support for this project will be provided by Merck Frosst Canada Inc. of Montreal* **1990-91 EP Apr 90–Mar 91**	$ 50,250/89-90 67,000/90-91
2367	**HAKIM, ANTOINE M.** **GJEDDE, ALBERT H.** *Neurology and Neurosurgery, McGill* N-Methyl-d-aspartate receptor function and blockade in cerebral ischemia (using CGS-19755 as a prototype) *1990-91 expenditure breakdown: additional support for this project will be provided by Ciba-Geigy Canada Ltd. of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 67,000/89-90 38,000/90-91	2372	**HUET, P.-MICHEL** **WILLEMS, BERNARD** *Médecine, Montréal* Essai thérapeutique de l'acide ursodéoxycholique dans le traitement des cholestases chroniques	$ 23,250/88-89 31,000/89-90 15,888/90-91
2368	**HAYNES, R. BRIAN** **RAMSDEN, MICHAEL F.** **LEVINE, MITCHELL A.H.** **MILNER, RUTH A.** ***Clinical Epidemiology and Biostatistics, McMaster*** Development and preliminary testing of four innovations in medical information technology *1990-91 expenditure breakdown: additional support for this project will be provided by B.C. Decker Inc. of Burlington, Ontario* **1990-91 EP Apr 90–Mar 91**	$ 28,275/89-90 37,700/90-91	2373	**INNIS, SHEILA M.** *Pediatrics, British Columbia* Infant fatty acid requirements *1990-91 expenditure breakdown: research support, $65,250; equipment, $63,000 (additional support for this project will be provided by Ross Laboratories of Columbus, Ohio)* **1990-91 EP Jul 90–Mar 91**	$ 128,250/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2374	**JEEJEEBHOY, KHURSHEED N.** *Medicine, Toronto* The effect of cachectin on the nutrition of parenterally fed animals *1990-91 expenditure breakdown: additional support for this project will be provided by Baxter Corporation of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 26,177/88-89 33,570/89-90 33,570/90-91	2380	**KEATING, ARMAND** *Medicine, Toronto* Combined autologous marrow and blood stem cell transplantation *1990-91 expenditure breakdown: additional support for this project will be provided by Cangene Corporation and by Baxter Corporation, both of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 20,141/89-90 60,425/90-91
2375	**JIMBOW, KOWICHI** *Medicine, Alberta* Radioimmunoassay and radioimmunoscintigraphy of melanoma *1990-91 expenditure breakdown: additional support for this project will be provided by Biomira Inc. of Edmonton* **1990-91 EP Apr 90–Mar 91**	$ 49,500/89-90 66,000/90-91	2381	**KIRBY, R. LEE** *Medicine, Dalhousie* **GREGSON, PETER H.** *Electrical Engineering, Technical University of Nova Scotia* **BAIRD, C. ROBERT** *Electrical Engineering, Technical University of Nova Scotia* **BROWN, MURRAY G.** *Community Health and Epidemiology, Dalhousie* Wheelchair stability *1990-91 expenditure breakdown: additional support for this project will be provided by Everest and Jennings Cdn. Ltd. of Concord, Ontario, and by the Nova Scotia Research Foundation Corporation, Dartmouth* **1990-91 EP Jul 90–Mar 91**	$ 35,375/90-91
2376	**JIMBOW, KOWICHI** *Medicine, Alberta* Reconstituted epidermal melanin unit and PUVA-induced repigmentation in normal and vitiliginous skin *1990-91 expenditure breakdown: additional support for this project will be provided by Stiefel Canada Inc. of Montréal* **1990-91 EP Jan 91–Mar 91**	$ 7,506/90-91			
2377	**JOHNSTON, MILES G.** *Pathology, Toronto* **HAY, JOHN B.** *Immunology, Toronto* **OREOPOULOS, DIMITRIOS G.** *Medicine, Toronto* Strategies to improve ultrafiltration in continuous ambulatory peritoneal dialysis: studies on the physiology and modulation of lymphatic drainage of the peritoneal cavity *1990-91 expenditure breakdown: additional support for this project will be provided by Baxter Corporation of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 35,250/89-90 47,000/90-91	2382	**KISILEVSKY, ROBERT S.** *Pathology, Queen's* **SZAREK, WALTER A.** *Chemistry, Queen's* An approach to a therapy for amyloids and Alzheimer's disease based on the relationship of glycosaminoglycans to amyloidosis *1990-91 expenditure breakdown: additional support for this project will be provided by the Upjohn Company of Kalamazoo, Michigan* **1990-91 EP Apr 90–Mar 91**	$ 55,760/89-90 57,575/90-91
2378	**KANG, C. YONG** *Microbiology and Immunology, Ottawa* Development of a candidate vaccine against AIDS *1990-91 expenditure breakdown: additional support for this project will be provided by Oxford Virology Ltd. of London, England* **1990-91 EP Apr 90–Mar 91**	$ 54,750/89-90 73,000/90-91	2383	**KLIP, AMIRA** *Pediatrics, Toronto* **LEITER, LAWRENCE A.** *Medicine, Toronto* Mechanism of action of the antidiabetic drug metformin in muscle cells in culture *1990-91 expenditure breakdown: additional support for this project will be provided by Nordic Laboratories of Kirkland, Québec* **1990-91 EP Apr 90–Mar 91**	$ 13,333/89-90 40,000/90-91
2379	**KATZ, SIDNEY** **BRIDGES, MICHAEL A.** *Pharmaceutical Sciences, British Columbia* Isolation and characterization of the airway epithelial chloride channel by pharmacological probes *1990-91 expenditure breakdown: additional support for this project will be provided by Merck Frosst Canada Inc. of Montreal* **1990-91 EP Apr 90–Sep 90**	$ 45,440/89-90 22,720/90-91	2384	**KNAUS, EDWARD E.** **WOLOWYK, MICHAEL W.** *Pharmacy and Pharmaceutical Sciences, Alberta* The design and evaluation of novel cardioselective calcium channel agonists for use in congestive heart failure *1990-91 expenditure breakdown: additional support for this project will be provided by Miles Canada Inc. of Etobicoke* **1990-91 EP Apr 90–Mar 91**	$ 13,333/89-90 40,000/90-91

List No.	Grant/Award	Financial History
2385	**KRUK, RONALD V.** *Psychology, Concordia* Visual contributions to simulator sickness *1990-91 expenditure breakdown: additional support for this project will be provided by CAE Electronics Ltd. of Montreal* **1990-91 EP Apr 90–Mar 91**	$ 49,276/88-89 52,135/89-90 52,135/90-91
2386	**LAUPACIS, ANDREAS** *Medicine, Western Ontario* **BARR, ROBERT M.** *Medicine, Western Ontario* **DUNCAN, CLIVE P.** *Orthopedics, British Columbia* **FEAGAN, BRIAN G.** *Medicine, Western Ontario* **BOURNE, ROBERT B.** *Surgery, Western Ontario* **RORABECK, CECIL H.** *Surgery, Western Ontario* **PAIEMENT, GUY D.** *Chirurgie, Montréal* **WADDELL, JAMES P.** *Surgery, Toronto* **SIM, DALICE A.** *Epidemiology and Biostatistics, Western Ontario* **GROSS, MICHAEL** *Surgery, Dalhousie* Erythropoietin-perisurgical study *1990-91 expenditure breakdown: additional support for this project will be provided by the R.W. Johnson Pharmaceutical Research Institute at Ortho Pharmaceutical (Canada) Ltd., Don Mills, Ontario* **1990-91 EP Jul 90–Mar 91**	$ 75,000/90-91
2387	**LEE, TING Y.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* **KOZAK, ROMAN I.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* **DEL MAESTRO, ROLANDO F.** *Clinical Neurological Sciences, Western Ontario* In vivo measurement of capillary permeability and blood flow in brain with CT scanning *1990-91 expenditure breakdown: additional support for this project will be provided by the UpJohn Company of Canada, Don Mills, and by GE Medical Systems Canada, Mississauga, Ontario* **1990-91 EP Oct 90–Mar 91**	$ 18,473/90-91
2388	**LEVY, JULIA G.** *Microbiology, British Columbia* **MCMASTER, W. ROBERT** *Medical Genetics, British Columbia* **KEATING, ARMAND** *Medicine, Toronto* Approaches to development of therapies for blood-borne malignancies *1990-91 expenditure breakdown: additional support for this project will be provided by Quadra Logic Technologies Inc. of Vancouver* **1990-91 EP Apr 90–Mar 91**	$ 435,750/87-89 235,870/89-90 221,790/90-91

N° de liste	Subvention/Bourse	Résumé financier
2389	**LONGENECKER, B. MICHAEL** *Immunology, Alberta* **MACLEAN, GRANT D.** *Medicine, Alberta* **JERRY, L. MARTIN** *Medicine, Calgary* **POPPEMA, SIBRAND** *Pathology, Alberta* Active specific immunotherapy of cancer using synthetic tumor-associated glycoconjugates *1990-91 expenditure breakdown: additional support for this project will be provided by Biomira Inc. of Edmonton* **1990-91 EP Jul 90–Mar 91**	$ 150,000/90-91
2390	**MACLEAN, GRANT D.** *Medicine, Alberta* **NOUJAIM, ANTOINE A.** *Pharmacy and Pharmaceutical Sciences, Alberta* **MCEWAN, ALEXANDER J.** *Radiology and Diagnostic Imaging, Alberta* Radioimmunoscintigraphy using novel monoclonal antibodies *1990-91 expenditure breakdown: additional support for this project will be provided by Biomira Inc. of Edmonton* **1990-91 EP Apr 90–Mar 91**	$ 224,000/87-89 163,770/89-90 165,360/90-91
2391	**MALO, JEAN-LUC** *Médecine, Montréal* **BOUTET, MICHEL** *Pathologie, Laval* **BOULET, LOUIS-P.** *Médecine, Laval* **COTE, JOHANNE** *Médecine, Laval* **DUGAS, MARIO** *Médecine, Montréal* **CARTIER, ANDRE** *Médecine, Montréal* **LAVIOLETTE, MICHEL** *Médecine, Laval* Inhaled steroids for asthmatic subjects after removal from the offending agent *1990-91 ventilation des dépenses: Glaxo Canada Inc. de Lachine, Québec, accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 9,117/89-90 54,702/90-91
2392	**MCDONALD, JOHN W.D.** *Medicine, Western Ontario* **LAUPACIS, ANDREAS** *Medicine, Western Ontario* **FEAGAN, BRIAN G.** *Medicine, Western Ontario* **ROCHON, JAMES** *Epidemiology and Biostatistics, Western Ontario* **IRVINE, ELIZABETH J.** *Medicine, McMaster* The Canadian Crohn's relapse prevention trial *1990-91 expenditure breakdown: additional support for this project will be provided by Sandoz Canada Inc. of Dorval, Québec* **1990-91 EP Apr 90–Mar 91**	$ 173,000/88-89 173,000/89-90 226,250/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2393	**MEDDINGS, JONATHAN B.** *Medicine, Calgary* **WALLACE, JOHN L.** *Medical Physiology, Calgary* **SUTHERLAND, LLOYD R.** *Medicine, Calgary* NSAIDs and the gastrointestinal tract *1990-91 expenditure breakdown: research support, $55,770; equipment, $78,118 (additional support for this project will be provided by Searle Canada Inc. of Oakville, Ontario)* **1990-91 EP Jul 90–Mar 91**	$ 133,888/90-91
2394	**MILLER, RICHARD G.** *Immunology, Toronto* Nature of recognition by lymphokine activated killer cells *1990-91 expenditure breakdown: additional support for this project will be provided by Connaught Laboratories Limited of Toronto* **1990-91 EP Apr 90–Mar 91**	$ 77,752/88-89 93,750/89-90 93,750/90-91
2395	**MOMPARLER, RICHARD L.** *Pharmacologie, Montréal* Evaluation of antineoplastic action of carboplatin and cytosine arabinoside *1990-91 ventilation des dépenses: Groupe pharmaceutique Bristol-Myers d'Ottawa accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 1,333/89-90 8,000/90-91
2396	**MOUTQUIN, JEAN-MARIE** *Obstétrique et gynécologie, Laval* **WHITFIELD, MICHAEL F.** *Pediatrics, British Columbia* **NWAESEI, CHUKWUMA G.** *Pediatrics, Dalhousie* **MILNER, RUTH A.** *Clinical Epidemiology and Biostatistics, McMaster* **SAIGAL, SAROJ** *Pediatrics, McMaster* **SAUVE, REGINALD S.** *Pediatrics, Calgary* **SINCLAIR, JOHN C.** *Pediatrics, McMaster* Canadian multicentre randomized controlled trial of the treatment of threatened preterm delivery: infant follow-up *1990-91 ventilation des dépenses: Groupe pharmaceutique Bristol-Myers d'Ottawa accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–sep 90**	$ 82,200/88-89 82,200/89-90 41,100/90-91
2397	**MURRAY, TIMOTHY M.** **RAO, LETICIA G.** *Medicine, Toronto* Effects of carboxylterminal fragments of parathyroid hormone on bone formation in vitro and structure-function analysis *1990-91 expenditure breakdown: research support, $21,547; equipment, $4,406 (additional support for this project will be provided by Allelix Biopharmaceuticals Inc. of Mississauga)* **1990-91 EP Oct 90–Mar 91**	$ 25,953/90-91
2398	**NATTEL, STANLEY** *Institut de cardiologie de Montréal* The efficacy and mechanisms of flecainide in a dog model of sustained atrial fibrillation *1990-91 ventilation des dépenses: Riker/3M Canada Inc. de London, Ontario, accordera un appui supplémentaire pour ce projet* **1990-91 EP oct 90–mar 91**	$ 14,950/90-91
2399	**OLNEY, SANDRA J.** *Rehabilitation Therapy, Queen's* **WYSS, URS P.** *Rehabilitation Therapy, Queen's* **COOKE, T. DEREK V.** *Surgery, Queen's* **ZEE, BENNY C.-Y.** *Community Health and Epidemiology, Queen's* Prospective randomized trial of LCS knees using Questor saw jig *1990-91 expenditure breakdown: additional support for this project will be provided by DePuy (Canada) Ltd. of Mississauga* **1990-91 EP Oct 90–Mar 91**	$ 12,518/90-91
2400	**PAGE, MICHEL** *Biochimie, Laval* **C.-GAUDREAULT, RENE** *Pharmacologie, Laval* Pilotage de la daunorubicine pour le traitement du cancer du poumon *1990-91 ventilation des dépenses: Rhône Poulenc Pharma Inc. de Montréal accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 14,597/89-90 46,780/90-91
2401	**PATER, JOSEPH L.** *Community Health and Epidemiology, Queen's* Immunotherapy of resected malignant melanoma *1990-91 expenditure breakdown: additional support for this project will be provided by Genentech Canada of Burlington, Ontario* **1990-91 EP Apr 90–Mar 91**	$ 26,121/89-90 34,828/90-91
2402	**POSNER, BARRY I.** *Medicine, McGill* **SHAVER, ALAN** *Chemistry, McGill* **FANTUS, I. GEORGE** *Medicine, McGill* The synthesis and assessment of peroxovanadium compounds as insulin-like agents for the therapy of diabetes mellitus *1990-91 expenditure breakdown: additional support for this project will be provided by Nordic Laboratories Inc. of Laval, Québec* **1990-91 EP Jan 91–Mar 91**	$ 14,421/90-91

Liste No.	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
2403	**POSNICK, JEFFREY C.** *Surgery, Toronto* **SLATE, R. KENDRICK** *Hospital for Sick Children (Toronto)* Fracture healing in fetal sheep in utero *1990-91 expenditure breakdown: additional support for this project will be provided by Leibinger and Fisher Ltd. of Irving, Texas, and by R. Laborie Surgical Ltd. of Rexdale, Ontario* **1990-91 EP Apr 90–Mar 91**	$ 4,515/89-90 27,087/90-91
2404	**PRUZANSKI, WALDEMAR** *Medicine, Toronto* **WEECH, PHILIP K.** *Merck Frosst Canada Inc. (Montreal)* **VADAS, PETER** *Pathology, Toronto* Secretory group II phospholipase A2 in inflammation: biological roles and regulatory mechanisms *1990-91 expenditure breakdown: additional support for this project will be provided by Merck Frosst Canada Inc.* **1990-91 EP Oct 90–Mar 91**	$ 41,500/90-91
2405	**RABKIN, SIMON W.** *Medicine, British Columbia* **HUFF, MURRAY W.** *Medicine, Western Ontario* Effect on lipids and lipoproteins of antihypertensive therapy *1990-91 expenditure breakdown: additional support for this project has been provided by Pfizer Canada Inc. of Kirkland, Québec* **1990-91 EP Apr 90–Mar 91**	$ 16,000/89-90 16,000/90-91
2406	**READ, RANDY J.** **ARMSTRONG, GLEN D.** *Medical Microbiology and Infectious Diseases, Alberta* Examination of pertussis toxin structure by X-ray crystallography *1990-91 expenditure breakdown: additional support for this project will be provided by Connaught Laboratories Limited of Willowdale* **1990-91 EP Jul 90–Mar 91**	$ 36,990/90-91
2407	**ROSENTHAL, KENNETH L.** *Pathology, McMaster* **GRAHAM, FRANK L.** *Biology, McMaster* **UNDERDOWN, BRIAN J.** *Pathology, McMaster* **PREVEC, LUDVIK A.** *Biology, McMaster* Identification of relevant T-cell epitopes of HIV for generation of an effective vaccine for AIDS *1990-91 expenditure breakdown: additional support for this project will be provided by Connaught Laboratories Ltd. of Willowdale* **1990-91 EP Apr 90–Mar 91**	$ 73,000/89-90 64,000/90-91
2408	**ROULEAU, JEAN-L.** *Médecine, Sherbrooke* **BICHET, DANIEL-G.M.** *Médecine, Montréal* **KLEIN, MARC L.** *Médecine, Montréal* **DAGENAIS, GILLES R.** *Médecine, Laval* **CUDDY, T. EDWARD** *Medicine, Manitoba* **PARKER, JOHN O.** *Medicine, Queen's* **BERNSTEIN, VICTORIA** *Medicine, British Columbia* **SUSSEX, BRUCE A.** *Medicine, Memorial University of Newfoundland* **ARNOLD, J. MALCOLM O.** *Medicine, Western Ontario* **KOSTUK, WILLIAM J.** *Medicine, Western Ontario* **MCCANS, JOHN L.** *Medicine, McGill* **DALY, PAUL A.** *Medicine, Toronto* **DE CHAMPLAIN, JACQUES** *Physiologie, Montréal* Neurohormones et dilatation ventriculaire post-infarctus *1990-91 ventilation des dépenses: Squibb Canada Inc. de Montréal accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 123,067/87-89 95,069/89-90 95,992/90-91
2409	**RUTT, BRIAN K.** *Diagnostic Radiology and Nuclear Medicine, Western Ontario* Development of advanced magnetic resonance angiography *1990-91 expenditure breakdown: additional support for this project will be provided by GE Medical Services Canada of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 10,333/89-90 20,000/90-91
2410	**SAVARD, PIERRE** *Génie biomédical, Montréal* **ROULEAU, JEAN-L.** *Médecine, Sherbrooke* **FERGUSON, JOHN** *Médecine, Sherbrooke* **SUSSEX, BRUCE A.** *Medicine, Memorial University of Newfoundland* **DAVIES, RICHARD F.** *Medicine, Ottawa* **JOHNSTONE, DAVID E.** *Medicine, Dalhousie* **STEWART, DUNCAN J.** *Medicine, McGill* **WARNICA, J. WAYNE** *Medicine, Calgary* **TALAJIC, MARIO** *Médecine, Montréal* Le rôle des potentiels tardifs dans l'évaluation du risque du patient post-infarctus aigu *1990-91 ventilation des dépenses: Squibb Canada Inc. de Montréal accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 150,333/89-90 71,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2411	**SCHRYVERS, ANTHONY B.** ***Microbiology and Infectious Diseases, Calgary*** Assessment of meningococcal transferrin and lactoferrin receptors as vaccine antigens *1990-91 expenditure breakdown: additional support for this project will be provided by Institut Merieux of Lyons* **1990-91 EP Apr 90–Mar 91**	$ 16,666/89-90 50,000/90-91
2412	**SHAFFER, ELDON A.** ***Medicine, Calgary*** Cholesterol gallstone disease: the effect of cisapride on gallbladder motility and medical therapies for cholelithiasis *1990-91 expenditure breakdown: additional support for this project will be provided by Janssen Pharmaceutica Inc. of Mississauga* **1990-91 EP Jan 91–Mar 91**	$ 8,838/90-91
2413	**SIROIS, PIERRE** ***Pharmacologie, Sherbrooke*** Pharmacologie des inhibiteurs et antagonistes des leucotriènes et du PAF *1990-91 ventilation des dépenses: Merck Frosst Canada Inc. de Montréal accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–sep 90**	$ 42,000/87-89 28,840/89-90 14,560/90-91
2414	**SKUP, DANIEL S.** ***Biochimie, Montréal*** **AYOUB, JOSEPH I.G.** ***Médecine, Montréal*** **BRADLEY, W. EDWARD C.** ***Médecine, Montréal*** **VIALLET, JEAN** ***Hôpital général de Montréal*** Purchase of an automated laser fluorescent DNA sequencer from Pharmacia for research on potential applications of automated sequencing of amplified DNA in oncology *1990-91 ventilation des dépenses: Pharmacia (Canada) Inc. de Baie d'Urfé, Québec, accordera un appui supplémentaire pour ce projet*	$ 162,000/90-91
2415	**SOURKES, THEODORE L.** ***Psychiatry, McGill*** Metabolism and biological activity of alpha-methyltryptophan *1990-91 expenditure breakdown: additional support for this project will be provided by Merck Frosst Canada Inc. of Montreal* **1990-91 EP Apr 90–Mar 91**	$ 6,000/88-89 8,000/89-90 8,000/90-91
2416	**SYMINGTON, JOHN M.** **LISTROM, ROBIN D.** ***Dentistry, Toronto*** In vivo animal study of a new dental implant design *1990-91 expenditure breakdown: additional support for this project will be provided by Bone Anchorage Systems, Inc., of Toronto* **1990-91 EP Apr 90–Mar 91**	$ 15,611/89-90 2,942/90-91
2417	**WALLACE, JOHN L.** ***Medical Physiology, Calgary*** Assessment of an etiopathological role for leukotrienes in an animal model of inflammatory bowel disease *1990-91 expenditure breakdown: additional support for this project will be provided by Merck Frosst Canada Inc. of Montreal* **1990-91 EP Apr 90–Mar 91**	$ 60,010/88-89 40,000/89-90 40,000/90-91
2418	**WARREN, R. ANTONY J.** **MILLER, ROBERT C., JR.** **KILBURN, DOUGLAS G.** ***Microbiology, British Columbia*** Immobilization of processing enzymes *1990-91 expenditure breakdown: research support, $33,000; equipment, $16,000 (additional support for this project will be provided by Ciba-Geigy Canada Ltd. of Mississauga)* **1990-91 EP Jul 90–Mar 91**	$ 49,000/90-91
2419	**WEBER, ANDREF M.** **PARADIS, KHAZAL J.-G.** ***Pédiatrie, Montréal*** Ursodeoxycholic acid in children with cholestatic diseases *1990-91 ventilation des dépenses: Interfalk Canada Inc. de Mont St-Hilaire, Québec, accordera un appui supplémentaire pour ce projet* **1990-91 EP avr 90–mar 91**	$ 9,799/89-90 29,397/90-91
2420	**WILLIAMS, H. BRUCE** ***Surgery, McGill*** **LOUGH, JOHN O.** ***Pathology, McGill*** The effects of electrical stimulation on denervated muscles using implantable electrodes	$ 40,500/88-89 54,000/89-90 23,625/90-91
2421	**YAMAMOTO, Y. LUCAS** **DIKSIC, MIRKO** ***Neurology and Neurosurgery, McGill*** Retrograde cerebral venous perfusion of calcium channel blockers as a new therapeutic approach for treatment of acute stroke *1990-91 expenditure breakdown: research support, $51,225; equipment, $55,000 (additional support for this project will be provided by Eli Lilly and Company of Indianapolis)* **1990-91 EP Jul 90–Mar 91**	$ 106,225/90-91

Career Investigatorships/Chercheurs de carrière

Total value/valeur totale: $3,178,908 1990-91.

2422 **ARMSTRONG, DAVID T.**
Obstetrics and Gynecology, Western Ontario
Ovarian regulation
1990-91 EP Apr 90–Mar 91

List No.	Grant/Award	Financial History
2423	**BASU, PRASANTA K.** *Ophthalmology, Toronto* Ocular toxicology; eye bank and corneal grafting; diabetic retinopathy **1990-91 EP Apr 90–Jun 90**	
2424	**BECKLAKE, MARGARET R.** *Epidemiology and Biostatistics, McGill* Lung function in the transition between health and disease **1990-91 EP Apr 90–Mar 91**	
2425	**BENOITON, N. LEO** *Biochemistry, Ottawa* Peptide chemistry and synthesis **1990-91 EP Apr 90–Mar 91**	
2426	**BIHLER, IVAN** *Pharmacology and Therapeutics, Manitoba* Regulation of sugar transport; studies on digitaloids **1990-91 EP Apr 90–Mar 91**	
2427	**BOUNOUS, GUSTAVO** *Surgery, McGill* Mechanism of immunoenhancement induced by lactalbumin in the diet of the mouse **1990-91 EP Apr 90–Mar 91**	
2428	**BRODER, IRVIN** *Medicine, Toronto* Impact of air quality and ventilation on human health; occupational lung diseases **1990-91 EP Apr 90–Mar 91**	
2429	**BROUGHTON, ROGER J.** *Medicine, Ottawa* Clinical aspects of sleep-wake mechanisms and disorders, and clinical epilepsy **1990-91 EP Apr 90–Mar 91**	
2430	**CARROLL, KENNETH K.** *Biochemistry, Western Ontario* Effects of diet on cholesterol metabolism and on plasma-lipid levels; role of dietary fat in mammary carcinogenesis; distribution, biochemical pathways, and function of dolichol and polyprenols **1990-91 EP Apr 90–Mar 91**	
2431	**CHANG, THOMAS M.S.** *Physiology, McGill* Basic and clinical studies of artificial cells **1990-91 EP Apr 90–Mar 91**	
2432	**COOPER, BERNARD A.** *Medicine, McGill* Transport and metabolism of vitamin B12 and folate **1990-91 EP Apr 90–Mar 91**	
2433	**DOSSETOR, JOHN B.** *Medicine, Alberta* Medical bioethics **1990-91 EP Apr 90–Mar 91**	

N° de liste	Subvention/Bourse	Résumé financier
2434	**FALK, RUDOLF E.** *Surgery, Toronto* Hepatic regeneration and its pathophysiology; prostaglandin-mediated cytoprotection; immunotherapy in neoplasia and acute immunosuppressed states; combined radiofrequency hyperthermia and chemotherapy in cancer **1990-91 EP Apr 90–Mar 91**	
2435	**FAULKNER, PETER** *Microbiology and Immunology, Queen's* The molecular genetics of baculoviruses **1990-91 EP Apr 90–Mar 91**	
2436	**GANOZA, M. CLELIA** *Banting and Best Department of Medical Research, Toronto* Mechanisms underlying translation of the genetic code **1990-91 EP Apr 90–Mar 91**	
2437	**GOLDSMITH, HARRY L.** *Medicine, McGill* The rheology of blood **1990-91 EP Apr 90–Mar 91**	
2438	**GORDON, JULIUS** *Surgery, McGill* Mechanism of the mixed leukocyte culture reaction; immunoregulation in anergy; antitumour immunity in mice deprived of B lymphocytes **1990-91 EP Apr 90–Mar 91**	
2439	**GORESKY, CARL A.** *Medicine, McGill* Transcapillary exchange, cellular entry, and metabolic disposal processes in well-perfused organs; metabolism of bilirubin in health and disease **1990-91 EP Apr 90–Mar 91**	
2440	**HAHN, PETER** *Obstetrics and Gynecology, British Columbia* The immediate and late effects of nutritional stimuli during early development **1990-91 EP Apr 90–Jun 90**	
2441	**HOBKIRK, RONALD** *Biochemistry, Western Ontario* Estrogen metabolism **1990-91 EP Apr 90–Mar 91**	
2442	**KUKSIS, ARNIS A.** *Banting and Best Department of Medical Research, Toronto* Lipid digestion and absorption; studies on bile acid and lipid metabolism **1990-91 EP Apr 90–Mar 91**	
2443	**LABELLA, FRANK S.** *Pharmacology and Therapeutics, Manitoba* Neuropharmacology (narcotic drugs and endorphins); mechanisms of general anesthesia; various programs in neuroendocrinology, neurochemistry, and neurotoxicology **1990-91 EP Apr 90–Mar 91**	

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2444 **LEBLANC, JACQUES A.**
Physiologie, Laval
Nervous and endocrine control of feeding thermogenesis in humans, dogs and rats; effect of exercise training on insulin secretion, thermogenesis and cold acclimation
1990-91 EP avr 90–mar 91

2445 **MILNER, BRENDA A.**
Neurology and Neurosurgery, McGill
Brain and human behaviour: effects of focal cerebral lesions
1990-91 EP Apr 90–Mar 91

2446 **MURPHY, BEVERLEY E.P.**
Medicine, McGill
Fetal endocrinology; psychoneuroendocrinology: premenstrual syndrome and the endocrine aspects of endogenous depression
1990-91 EP Apr 90–Mar 91

2447 **NADEAU, REGINALD A.**
Médecine, Montréal
The relationship of the autonomic nervous system to cardiac arrhythmias during ischemia and perfusion; cardiac electrophysiology
1990-91 EP avr 90–mar 91

2448 **RAUTAHARJU, PENTTI M.**
Medicine, Alberta
Theoretical development and practical application of new diagnostic techniques in cardiovascular epidemiological studies and preventive clinical trials
1990-91 EP Apr 90–Mar 91

2449 **REGOECZI, ERWIN**
Pathology, McMaster
Physiology and pathophysiology of plasma protein metabolism
1990-91 EP Apr 90–Mar 91

2450 **REGOLI, DOMENICO C.**
Pharmacologie, Sherbrooke
Pharmacologie des hormones polypeptides
1990-91 EP avr 90–mar 91

2451 **ROBERTS, KENNETH D.**
Biochimie, Montréal
Studies on the male and female reproductive systems
1990-91 EP avr 90–mar 91

2452 **SANDOR, THOMAS**
Médecine, Montréal
La biochimie comparée des stéroïdes
1990-91 EP avr 90–mar 91

2453 **SMITH, MICHAEL**
Biochemistry, British Columbia
Oligonucleotides as tools in molecular biology; studies on gene expression; protein structure-function analysis
1990-91 EP Apr 90–Mar 91

2454 **SMITH, RICHARD S.**
Anatomy and Cell Biology, Alberta
Mechanisms of axonal transport and of axonal regeneration
1990-91 EP Apr 90–Mar 91

2455 **SPENCE, MATTHEW W.**
Pediatrics, Dalhousie
Membrane phospholipid metabolism and its control, with a major emphasis on phosphatidylcholine and sphingomyelin
1990-91 EP Apr 90–Jul 90

2456 **STRICKLAND, KENNETH P.**
Biochemistry, Western Ontario
Metabolism and function of the phospholipids, in particular phosphatidylinositol; biochemical and structural studies relating to myoblasts and fibroblasts and whole muscle tissues from normal and dystrophic hamsters and to L6 myoblasts
1990-91 EP Apr 90–Mar 91

2457 **TENER, GORDON M.**
Biochemistry, British Columbia
Studies on tRNAs and tRNA genes of Drosophila melanogaster, and on the molecular biology of aging
1990-91 EP Apr 90–Mar 91

2458 **TONZETICH, JOSEPH**
Dentistry, British Columbia
Detection and production of volatile sulfhydryl compounds within the oral cavity
1990-91 EP Apr 90–Mar 91

2459 **WADA, JUHN A.**
Psychiatry, British Columbia
Studies on epilepsy and human brain asymmetry
1990-91 EP Apr 90–Mar 91

2460 **WAINWRIGHT, STANLEY D.**
Biochemistry, Dalhousie
Biochemical and molecular mechanisms underlying the biological clock in the chick pineal gland
1990-91 EP Apr 90–Mar 91

2461 **WOLFE, LEONHARD S.**
Neurology and Neurosurgery, McGill
Studies on inherited neurological diseases; studies on brain eicosanoids in cerebral injury and ischemia
1990-91 EP Apr 90–Mar 91

MRC Scientists/Scientifiques du CRM

Total value/valeur totale: $2,570,778 1990-91

2462 **ANAND-SRIVASTAVA, MADHU B.**
Physiologie, Montréal
Hormone receptors and signal transduction
1990-91 EP avr 90–mar 91

2463 **BEAUDET, ALAIN**
Neurologie et neurochirurgie, McGill
Contributions morphologiques à l'étude de la neurotransmission chimique
1990-91 EP avr 90–jui 90

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2464 **BENDAYAN, MOISE**
Anatomie, Montréal
Pancreatic endocrine-exocrine relationships in normal and diabetic conditions; immunochemical study of protein secretion; immunocytochemical investigation of the different components of the glomerular basal laminae in normal and diabetic rats; application of the enzyme-gold technique for the ultrastructural localization of nucleic acids
1990-91 EP avr 90–jui 90

2465 **BOBYN, J. DENNIS**
Surgery, McGill
Evaluation of implant design and tissue response in non-cemented total hip arthroplasty
1990-91 EP Apr 90–Mar 91

2466 **BREITMAN, MARTIN L.**
Medical Genetics, Toronto
Genetic and biochemical mechanisms controlling normal development and malignant disease
1990-91 EP Apr 90–Mar 91

2467 **CHACONAS, GEORGE**
Biochemistry, Western Ontario
The mechanism of bacteriophage Mu DNA transposition
1990-91 EP Apr 90–Mar 91

2468 **CHARLTON, MILTON P.**
Physiology, Toronto
Excitation-secretion coupling and synaptic plasticity
1990-91 EP Apr 90–Mar 91

2469 **DE LEAN, ANDRE**
Pharmacologie, Montréal
Molecular biology and pharmacology of cardiac hormones
1990-91 EP jlt 90–mar 91

2470 **DROUIN, JACQUES**
Institut de recherches cliniques de Montréal
Hormone genes as a model system for complex regulation of eukaryotic gene expression
1990-91 EP avr 90–mar 91

2471 **FEWELL, JAMES E.**
Obstetrics and Gynecology, Calgary
Arousal response to cardiorespiratory stimuli
1990-91 EP Jul 90–Mar 91

2472 **FRADET, YVES**
Chirurgie, Laval
Clinical and biological significance of bladder tumor-associated antigens
1990-91 EP avr 90–mar 91

2473 **GASCON-BARRE, MARIELLE**
Pharmacologie, Montréal
Interrelations entre le métabolisme hépatique et la vitamine D
1990-91 EP avr 90–mar 91

2474 **GERRARD, JONATHAN M.**
Pediatrics and Child Health, Manitoba
Cellular biology of blood platelets; platelet function disorders; platelets and malignancies; prostaglandins and thromboxanes in cardiovascular disease
1990-91 EP Apr 90–Jun 90

2475 **IATROU, KOSTAS**
Medical Biochemistry, Calgary
The chorion of the silkmoth Bombyx mori as a model system for the study of the organization, expression and evolution of eukaryotic multigene families
1990-91 EP Apr 90–Mar 91

2476 **JOANETTE, YVES**
Orthophonie et audiologie, Montréal
Hémisphère droit et représentation cérébrale du langage: nature de la contribution et diachronie
1990-91 EP avr 90–mar 91

2477 **JORGENSEN, ANNELISE O.**
Anatomy, Toronto
Structure, function and biogenesis of Ca2+ storage sites in the sarcoplasmic reticulum of cardiac muscle
1990-91 EP Apr 90–Nov 90

2478 **JURILOFF, DIANA M.**
Medical Genetics, British Columbia
Developmental genetic studies in mice
1990-91 EP Apr 90–Mar 91

2479 **KASTING, NORMAN W.**
Physiology, British Columbia
Vasopressin as a homeostatic effector in the febrile process
1990-91 EP Apr 90–Mar 91

2480 **KLIP, AMIRA**
Pediatrics, Toronto
Regulation of glucose uptake and cytosolic Ca2+ in muscle
1990-91 EP Apr 90–Mar 91

2481 **LEE, JEREMY S.**
Biochemistry, Saskatchewan
Antibodies to nucleic acids
1990-91 EP Jul 90–Mar 91

2482 **LEUNG, PETER C.K.**
Obstetrics and Gynecology, British Columbia
Regulation of ovarian cell function
1990-91 EP Apr 90–Mar 91

2483 **LEVINE, MARK N.**
Medicine, McMaster
Stage II breast cancer; thromboembolic disease in the cancer patient; design and execution of cancer clinical trials in Ontario
1990-91 EP Apr 90–Mar 91

2484 **LUMSDEN, CHARLES J.**
Medicine, Toronto
Development and analysis of whole-organ theory
1990-91 EP Apr 90–Mar 91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2485 **MACVICAR, BRIAN A.**
Medical Physiology, Calgary
Non-synaptic and synaptic control of neuronal excitability
1990-91 EP Apr 90–Mar 91

2486 **MARTIN, JAMES G.**
Medicine, McGill
Mechanisms of airway hyperresponsiveness
1990-91 EP Apr 90–Mar 91

2487 **MILNE, ROSS W.**
Institut de recherches cliniques de Montréal
Immunochemical studies of human apolipoprotein B
1990-91 EP avr 90–mar 91

2488 **NAGY, JAMES I.**
Physiology, Manitoba
Neuroanatomy and neurochemistry of primary afferent systems; gap junctions and gap junction protein in the CNS; purine metabolism and neuromodulation in the CNS
1990-91 EP Apr 90–Mar 91

2489 **O'BYRNE, PAUL M.**
Medicine, McMaster
Interaction of mediators in asthma
1990-91 EP Apr 90–Mar 91

2490 **PARHAD, IRMA M.**
Pathology, Calgary
Neurofilament gene regulation in vivo
1990-91 EP Apr 90–Mar 91

2491 **PITTMAN, QUENTIN J.**
Medical Physiology, Calgary
Peptide neurotransmission in brain
1990-91 EP Apr 90–Jun 90

2492 **RODER, JOHN C.**
Immunology, Toronto
Common molecular mechanisms for cell recognition in the immune and nervous systems
1990-91 EP Apr 90–Mar 91

2493 **ROUGHLEY, PETER J.**
Surgery, McGill
The structure, synthesis and degradation of proteoglycans and their relation to the function of human articular cartilage
1990-91 EP Apr 90–Mar 91

2494 **SCHNEIDER, WOLFGANG J.**
Biochemistry, Alberta
Receptor-mediated cholesterol transport and control of oocyte growth
1990-91 EP Apr 90–Mar 91

2495 **SERGENT, JUSTINE**
Neurology and Neurosurgery, McGill
Hemispheric specialization and cooperation in visual information processing
1990-91 EP Apr 90–Mar 91

2496 **SILVIUS, JOHN R.**
Biochemistry, McGill
Liposome-cell interactions and lipid organization in biological and model membranes
1990-91 EP Jul 90–Mar 91

2497 **SIROIS, PIERRE**
Pharmacologie, Sherbrooke
Immunopharmacologie des leucotriènes
1990-91 EP avr 90–mar 91

2498 **SLUTSKY, ARTHUR S.**
Medicine, Toronto
Mechanisms of lung injury investigated using constant flow ventilation
1990-91 EP Apr 90–Jun 90

2499 **SONENBERG, NAHUM**
Biochemistry, McGill
Translational control of c-myc expression
1990-91 EP Apr 90–Mar 91

2500 **TSUI, LAP-CHEE**
Medical Genetics, Toronto
Molecular biology of cystic fibrosis and gene expression in mammalian eye lens
1990-91 EP Apr 90–Mar 91

2501 **TYML, KAREL**
Medical Biophysics, Western Ontario
Heterogeneity of microvascular perfusion in skeletal muscle
1990-91 EP Apr 90–Mar 91

2502 **VAN DER KOOY, DEREK J.**
Anatomy, Toronto
Pattern formation in the developing mammalian nervous system
1990-91 EP Apr 90–Mar 91

2503 **VINCENT, STEVEN R.**
Psychiatry, British Columbia
NADPH-diaphorase and neurotransmitter coexistence in the brain
1990-91 EP Apr 90–Mar 91

2504 **WAISMAN, DAVID M.**
Medical Biochemistry, Calgary
Covalent regulation of Ca2+-binding proteins
1990-91 EP Jul 90–Mar 91

2505 **WALSH, MICHAEL P.**
Medical Biochemistry, Calgary
Second messenger control: enzyme regulation by Ca2+, cAMP and diacylglycerol
1990-91 EP Apr 90–Mar 91

2506 **WALZ, WOLFGANG**
Physiology, Saskatchewan
An in vitro model of cytotoxic brain edema
1990-91 EP Apr 90–Mar 91

2507 **WANG, Y.-H. EUGENIA**
Anatomy, McGill
Programmed control of cell proliferation during cell aging
1990-91 EP Apr 90–Mar 91

2508 **ZANNIS-HADJOPOULOS, MARIA**
Medicine, McGill
Molecular events controlling the initiation of DNA replication
1990-91 EP Apr 90–Mar 91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

University-Industry Research Chairs/Chaires université-industrie de recherche

Total value (1990-91): salary support for one investigator.

Valeur totale (1990-91): appui salarial pour un chercheur.

2509 **REUDELHUBER, TIMOTHY L.**
Médecine, Montréal
Structure-function relationships in human prorenin
1990-91 ventilation des dépenses: Merck Frosst Canada Inc. de Kirkland, Québec, accordera un appui supplémentaire pour cette bourse
1990-91 EP oct 90–mar 91

University-Industry Scientists/Scientifiques université-industrie

Total value (1990-91): salary support for two investigators.

Valeur totale (1990-91): appui salarial pour deux chercheurs.

2510 **HEISLER, SEYMOUR**
Medicine, McGill
Pharmacological management of the electrolyte (Na+ and Cl-) transport dysfunction in cystic fibrosis
1990-91 EP Apr 90–Mar 91

2511 **LEVY, JULIA G.**
Microbiology, British Columbia
Approaches to development of therapies for blood-borne malignancies
1990-91 expenditure breakdown: additional salary support will be provided by Quadra Logic Technologies Inc. of Vancouver
1990-91 EP Apr 90–Mar 91

Scholarships/Chercheurs-boursiers

Total value/valeur totale: $6,797,645 1990-91

2512 **AEBERSOLD, RUEDI**
Biochemistry, British Columbia
Investigation of cell internal regulatory pathways by direct protein analysis
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2513 **ANDERSON, WILLIAM A.**
Anatomy, Manitoba
Descending systems regulating pain suppression within the spinal cord
1990-91 EP Apr 90–Mar 91

2514 **ANDREWS, DAVID W.**
Biochemistry, McMaster
Protein transport into and across the endoplasmic reticulum membrane
1990-91 EP Apr 90–Mar 91

2515 **ARTHUR, GILBERT**
Biochemistry and Molecular Biology, Manitoba
Arachidonate metabolism in mammalian heart and regulation of ethanolamine glycerophospholipid in mammalian tissues
1990-91 EP Apr 90–Mar 91

2516 **BACK, DONALD W.**
Biochemistry, Queen's
Regulation of lipogenic enzyme gene expression
1990-91 EP Apr 90–Mar 91

2517 **BARNES, STEVEN A.**
Medical Physiology, Calgary
Mechanisms of synaptic interaction among photoreceptors of the vertebrate retina
1990-91 EP Apr 90–Mar 91

2518 **BATES, JASON H.T.**
Medicine, McGill
The development and application of methodologies for the investigation of respiratory mechanics
1990-91 EP Apr 90–Mar 91

2519 **BATIST, GERALD**
Medicine, McGill
Detoxification enzymes in tumor cell drug resistance
1990-91 EP Apr 90–Mar 91

2520 **BEDARD, P.-ANDRE**
Biochimie, Montréal
Identification and characterization of cellular factors involved in the transformation process
1990-91 EP avr 90–mar 91

2521 **BELL, JOHN C.**
Medicine, Ottawa
Regulation of growth and differentiation by phosphotyrosyl proteins
1990-91 EP Apr 90–Mar 91

2522 **BERINSTEIN, NEIL L.**
Medicine, Toronto
The study of human B cell lymphomas by molecular and immunologic approaches
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2523 **BERTHIAUME, YVES**
Medicine, Calgary
Mechanisms of lung liquid clearance
1990-91 EP Apr 90–Mar 91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2524 **BLAHA, CHARLES D.**
Psychiatry, British Columbia
Cholecystokinin and neurotensin modulation of midbrain dopamine neurons
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2525 **BLENNERHASSETT, MICHAEL G.**
Pathology, McMaster
Heterocellular interactions in the gastrointestinal tract
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2526 **BLIER, PIERRE**
Psychiatry, McGill
Effects of antidepressant treatments on serotonin neurons: biochemical, electrochemical and electrophysiological studies
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2527 **BOURQUE, CHARLES W.**
Neurology and Neurosurgery, McGill
Membrane currents in neurosecretory neurons
1990-91 EP Apr 90–Mar 91

2528 **BOUVIER, MICHEL**
Biochimie, Montréal
Molecular mechanisms regulating adrenergic transmission
1990-91 EP avr 90–mar 91

2529 **BYERS, DAVID M.**
Pediatrics, Dalhousie
Fatty acid metabolism and membrane regulation in cell development
1990-91 EP Apr 90–Mar 91

2530 **CAMPBELL, CHRISTINE E.**
Medical Genetics, Toronto
The regulation and role of cell surface carbohydrate synthesis in metastasis
1990-91 EP Apr 90–Mar 91

2531 **CATES, GEORGE A.**
Biochemistry, Queen's
Glycoprotein involvement in skeletal muscle differentiation
1990-91 EP Apr 90–Mar 91

2532 **CATTINI, PETER A.**
Physiology, Manitoba
Control of human chorionic somatomammotropin gene expression
1990-91 EP Apr 90–Mar 91

2533 **CHABOT, BENOIT**
Microbiologie, Sherbrooke
Epissage alternatif des ARNs prémessagers des cellules de mammifères
1990-91 EP avr 90–mar 91

2534 **CHERTKOW, HOWARD M.**
Neurology and Neurosurgery, McGill
Semantic memory: cognitive studies, localization, and diagnostic applications
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2535 **CLARK-LEWIS, IAN**
Biochemistry, British Columbia
Structure-function of hemopoietic growth factors
1990-91 EP Apr 90–Mar 91

2536 **CODERRE, TERENCE J.**
Médecine, Montréal
Interactions in antinociceptive and nociceptive systems in the rat
1990-91 ventilation des dépenses: en plus du salaire du chercheur, une indemnité de recherche de $15,000
1990-91 EP avr 90–mar 91

2537 **COLE, WILLIAM C.**
Physiology, Manitoba
Effect of free radicals on electrical properties of cardiac muscle
1990-91 EP Apr 90–Mar 91

2538 **CROMLISH, JAMES A.**
Biochemistry, McGill
Mechanism and regulation of mammalian RNA polymerase III transcription initiation
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2539 **CURRY, KENNETH**
Pharmaceutical Sciences, British Columbia
The isolation and characterization of excitatory amino acid receptors
1990-91 EP Apr 90–Mar 91

2540 **CYBULSKY, ANDREY V.**
Medicine, McGill
Effects of antibody and complement on the glomerular epithelial cell
1990-91 EP Apr 90–Mar 91

2541 **DAVID, SAMUEL**
Medicine, McGill
Molecular and cellular changes in glia during development and following central nervous system injuries
1990-91 EP Apr 90–Jun 90

2542 **DAVIE, JAMES R.**
Biochemistry and Molecular Biology, Manitoba
Biochemical characterization of transcriptionally active chromatin; composition, structure and susceptibility to aflatoxin B1 adduction
1990-91 EP Apr 90–Jun 90

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2543 **DELANGE, A.M. LUKE**
Human Genetics, Manitoba
Genetic control of DNA replication and recombination of vaccinia virus
1990-91 EP Apr 90–Mar 91

2544 **DESGROSEILLERS, LUC**
Biochimie, Montréal
Neurobiologie d'Aplysia californica
1990-91 EP avr 90–mar 91

2545 **DODD, JANICE G.**
Physiology, Manitoba
Gene expression in the human prostate
1990-91 EP Apr 90–Mar 91

2546 **DRAPEAU, PIERRE**
Neurology and Neurosurgery, McGill
Formation and functioning of synapses between identified leech neurons in culture
1990-91 EP Apr 90–Jun 90

2547 **DUBUC, REJEAN**
Kinanthropologie, Québec à Montréal
The role of reticulospinal neurons in the control of locomotion in lampreys
1990-91 ventilation des dépenses: en plus du salaire du chercheur, une indemnité de recherche de $15,000
1990-91 EP jui 90–mar 91

2548 **EASTON, PAUL A.**
Medicine, Calgary
Respiratory muscle function and coordination in the intact canine
1990-91 EP Apr 90–Mar 91

2549 **ELLIOTT, JOHN F.**
Medical Microbiology and Infectious Diseases, Alberta
Eucaryotic expression cloning and characterization of malaria surface antigens
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2550 **ELLISON, MICHAEL J.**
Biochemistry, Alberta
The function of ubiquitin in DNA repair and cell cycle control
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2551 **ELSHOLTZ, HARRY P.**
Clinical Biochemistry, Toronto
The relationship of tissue-specific transcription factors to Pit-1, an activator of the prolactin gene; dopaminergic regulation of transcription: the prolactin gene as a model
1990-91 EP Apr 90–Mar 91

2552 **FEATHERSTONE, MARK S.**
Cancer Centre, McGill
Structural and functional characterization of a vertebrate homeogene
1990-91 EP Apr 90–Mar 91

2553 **FEDORKO, LUDWIK M.**
Pediatrics, Toronto
Electrophysiology and neurochemistry of neural respiratory control
1990-91 EP Apr 90–Mar 91

2554 **FUNNELL, BARBARA E.**
Medical Genetics, Toronto
Minichromosome segregation: P1 plasmid partition in Escherichia coli
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2555 **GAGNON, ROBERT**
Obstetrics and Gynecology, Western Ontario
Diagnostic indicators of fetal health
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2556 **GARIEPY, JEAN G.**
Medical Biophysics, Toronto
Structure and site of action of the E. coli heat-stable enterotoxin ST 1
1990-91 EP Apr 90–Mar 91

2557 **GEIGER, JONATHAN D.**
Pharmacology and Therapeutics, Manitoba
Neuromodulatory action of adenosine: neurochemical investigations
1990-91 EP Apr 90–Mar 91

2558 **GHADIRIAN, ESFANDIAR**
Medicine, McGill
Mechanisms of host resistance to infection with Entamoeba histolytica in the murine host
1990-91 EP Apr 90–Jun 90

2559 **GIGUERE, VINCENT**
Medical Genetics, Toronto
Structure and function of steroid hormone receptors
1990-91 EP Apr 90–Mar 91

2560 **GOH, JOANNE W.Y.**
Pharmacology and Toxicology, Queen's
Cellular mechanisms of long-term potentiation of hippocampal synaptic transmission
1990-91 EP Apr 90–Mar 91

2561 **GOODFELLOW, PAUL J.**
Medical Genetics, British Columbia
A combined somatic cell and molecular genetics approach to cloning the MEN-2A gene
1990-91 EP Apr 90–Mar 91

2562 **GRANT, DENIS M.**
Pediatrics, Toronto
Molecular pharmacogenetics of human drug-metabolizing enzymes: studies of arylamine N-acetyltransferases
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2563 **GRONOSTAJSKI, RICHARD M.**
Medical Biophysics, Toronto
The role of nuclear factor I in DNA metabolism
1990-91 EP Apr 90–Mar 91

2564 **GUTTMAN, MARK**
Neurology and Neurosurgery, McGill
Compensatory mechanisms after dopaminergic denervation: in vivo and in vitro studies in a primate model of parkinsonism
1990-91 EP Apr 90–Jun 90

2565 **HAMEL, EDITH**
Neurologie et neurochirurgie, McGill
Caractérisation de l'innervation et des sites récepteurs au niveau du lit cérébrovasculaire
1990-91 EP avr 90–mar 91

2566 **HAMMOND, JAMES R.**
Pharmacology and Toxicology, Western Ontario
Characterization, isolation, and reconstitution of nucleoside transport systems
1990-91 EP Apr 90–Mar 91

2567 **HANRAHAN, JOHN W.**
Physiology, McGill
Epithelial anion conductance
1990-91 EP Apr 90–Mar 91

2568 **HAYNES, LAWRENCE W.**
Medical Physiology, Calgary
Properties of the cGMP-gated channels of vertebrate rods and cones
1990-91 EP Apr 90–Mar 91

2569 **HENDY, GEOFFREY N.**
Medicine, McGill
The molecular biology of parathyroid gland activity
1990-91 EP Apr 90–Sep 90

2570 **HISCOTT, JOHN**
Microbiology and Immunology, McGill
Regulation of human interferon gene expression
1990-91 EP Apr 90–Jul 90

2571 **HO, ANTHONY K.**
Physiology, Alberta
Transmembrane signalling, post-receptor mechanism and physiological influences
1990-91 EP Apr 90–Mar 91

2572 **HOWARD, S. PETER**
Basic Medical Sciences, Memorial University of Newfoundland
Posttranslational modification, assembly and function of the colicin A lysis protein; isolation of extracellular secretion genes of Aeromonas hydrophila
1990-91 EP Apr 90–Mar 91

2573 **HUIZINGA, JAN D.**
Biomedical Sciences, McMaster
Electrophysiological basis of human colon motility in health and disease
1990-91 EP Apr 90–Mar 91

2574 **HUMPHRIES, R. KEITH**
Medicine, British Columbia
Molecular genetic studies of normal and malignant hemopoiesis
1990-91 EP Apr 90–Jun 90

2575 **ISSA, FAIQ G.**
Medicine, Calgary
Control of breathing
1990-91 EP Apr 90–Mar 91

2576 **JHAMANDAS, JACK H.**
Medicine, Alberta
Electrophysiological characterization of cardiovascular pathways to the central nervous system in the rat
1990-91 EP Apr 90–Mar 91

2577 **JOYNER, ALEXANDRA L.**
Medical Genetics, Toronto
Molecular genetic analysis of mammalian development
1990-91 EP Apr 90–Mar 91

2578 **KAN, FREDERICK W.K.**
Anatomie, Montréal
Immunocytochemical localization and characterization of membrane components in relation to cell differentiation and maturation
1990-91 EP avr 90–mar 91

2579 **KARDAMI, ELISSAVET**
Physiology, Manitoba
Studies on the control of cardiac myocyte proliferation
1990-91 EP Apr 90–Mar 91

2580 **KOTHARY, RASHMI K.**
Médecine, Montréal
Molecular characterization of a neural-specific gene, dystonia musculorum
1990-91 ventilation des dépenses: en plus du salaire du chercheur, une indemnité de recherche de $15,000
1990-91 EP jlt 90–mar 91

2581 **KRAUSE, HENRY M.**
Banting and Best Department of Medical Research, Toronto
An analysis of the role(s) of ftz protein phosphorylation during Drosophila development
1990-91 EP Apr 90–Mar 91

2582 **KRIEGER, CHARLES**
Medicine, British Columbia
Studies of the pathogenesis of neuronal loss in motor neuron disease (amyotrophic lateral sclerosis)
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $30,000
1990-91 EP Jul 90–Mar 91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2583 **LEBLANC, NORMAND P.**
Physiology, Manitoba
Electrogenesis and Ca2+ transients in single vascular smooth muscle cells
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2584 **LUDWIG, MARA S.**
Medicine, McGill
Lung tissue behaviour and its determinants
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2585 **MAGER, DIXIE L.**
Medical Genetics, British Columbia
A program in human molecular genetics, aimed at understanding molecular mechanisms controlling normal and (or) neoplastic cellular function
1990-91 EP Apr 90–Mar 91

2586 **MALOUIN, FRANCOIS**
Microbiologie, Laval
Studies on the mechanisms of non-beta-lactamase-mediated beta-lactam resistance and tolerance in Haemophilus influenzae
1990-91 ventilation des dépenses: en plus du salaire du chercheur, une indemnité de recherche de $15,000
1990-91 EP avr 90–mar 91

2587 **MARCEAU, FRANCOIS**
Pharmacologie, Laval
Tissue actions of certain humoral mediators of inflammation
1990-91 EP avr 90–jui 90

2588 **MCCORMACK, DAVID G.**
Medicine, Western Ontario
Mechanisms of altered pulmonary vascular reactivity in disease
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $30,000
1990-91 EP Jul 90–Mar 91

2589 **MENEILLY, GRAYDON S.**
Medicine, British Columbia
Effect of age on carbohydrate metabolism
1990-91 EP Apr 90–Mar 91

2590 **MEUNIER, HELENE F.**
Clinical Biochemistry, Toronto
Hormonal control of activin/inhibin subunits gene expression
1990-91 EP Apr 90–Mar 91

2591 **MILLS, GORDON B.**
Obstetrics and Gynecology, Toronto
Role of growth factors in the initiation, progression and therapy of malignant disease
1990-91 EP Apr 90–Mar 91

2592 **MITCHELL, GRANT A.**
Pédiatrie, Montréal
Molecular biology of two mitochondrial inborn errors of metabolism
1990-91 ventilation des dépenses: en plus du salaire du chercheur, une indemnité de recherche de $15,000
1990-91 EP jui 90–mar 91

2593 **MOODY-CORBETT, FRANCES L.**
Physiology, Memorial University of Newfoundland
Distribution and modulation of potassium channels on Xenopus muscle cells developing in culture
1990-91 EP Apr 90–Mar 91

2594 **MURPHY, LIAM J.**
Medicine, Manitoba
Regulation of insulin-like growth factor-I gene expression
1990-91 EP Apr 90–Mar 91

2595 **MURPHY, PAUL R.**
Physiology and Biophysics, Dalhousie
Regulation of basic fibroblast growth factor expression and secretion
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2596 **NAUS, CHRISTIAN C.G.**
Anatomy, Western Ontario
The effects of ethanol on development of somatosensory cortex and hippocampus
1990-91 EP Apr 90–Mar 91

2597 **O'DRISCOLL, SHAWN W.**
Surgery, Toronto
Regulation of periosteal neochondrogenesis for cartilage regeneration
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2598 **O'KUSKY, JOHN R.**
Pathology, British Columbia
Pathogenesis of spastic encephalopathies in the developing nervous system: the abnormal development and pathology of neurotransmitter-specific neurons
1990-91 EP Apr 90–Mar 91

2599 **OPAS, MICHAL J.**
Anatomy, Toronto
Adhesion to substrata and cytoskeleton in retinal pigmented epithelium during growth and differentiation in vitro
1990-91 EP Apr 90–Mar 91

2600 **OWENS, TREVOR**
Neurology and Neurosurgery, McGill
The regulation of CD4+ helper T cell activation
1990-91 EP Apr 90–Mar 91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2601 **PELECH, STEVEN D.**
Medicine, British Columbia
Role of protein phosphorylation in cell proliferation and transformation
1990-91 EP Apr 90–Mar 91

2602 **PETKOVICH, P. MARTIN**
Pathology, Queen's
Role of retinoic acid receptors in chick limb development
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jan 91–Mar 91

2603 **PHILLIPS, NIGEL C.**
Medicine, McGill
Macrophage activation in genetically deficient mice by liposomal biological response modifiers
1990-91 EP Apr 90–Jan 91

2604 **PLUMMER, FRANCIS A.**
Medical Microbiology, Manitoba
The role of human immunity in the ecology of Neisseria gonorrhoeae in Kenya
1990-91 EP Apr 90–Mar 91

2605 **POIRIER, JUDES**
Medicine, McGill
Gene expression in the hippocampus following selective deafferentations: an animal model to study reactive synaptogenesis in Alzheimer's disease
1990-91 EP Apr 90–Mar 91

2606 **POUSSIER, PHILIPPE G.A.**
Medicine, McGill
The immunology of type I diabetes in the BB rat
1990-91 EP Apr 90–Jun 90

2607 **PRUD'HOMME, GERALD J.**
Pathology, McGill
The etiopathogenesis of insulin-dependent diabetes mellitus
1990-91 EP Apr 90–Mar 91

2608 **RACHUBINSKI, RICHARD A.**
Biochemistry, McMaster
Aspects of organelle biogenesis: studies on the peroxisome
1990-91 EP Apr 90–Nov 90

2609 **REINER, PETER B.**
Psychiatry, British Columbia
Neurobiology of central histamine neurons
1990-91 EP Apr 90–Mar 91

2610 **ROACH, ARTHUR H.**
Medical Genetics, Toronto
Cell-cell interactions regulating gene expression in development and plasticity of the central nervous system
1990-91 EP Apr 90–Mar 91

2611 **ROSENBERG, LAWRENCE**
Surgery, McGill
Induction of endocrine cell differentiation in the hamster pancreas
1990-91 EP Apr 90–Mar 91

2612 **ROULEAU, GUY A.**
Neurology and Neurosurgery, McGill
Identification of the neurofibromatosis 2 gene
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2613 **RUZSICSKA, BELA P.**
Médecine nucléaire et radiobiologie, Sherbrooke
Mécanisme photochimique de réparation de dimères de pyrimidine dans l'ADN photolyase
1990-91 EP avr 90–mar 91

2614 **SARFATI, MARIE**
Médecine, Montréal
IgE-binding factors in human milk
1990-91 EP avr 90–mar 91

2615 **SAVARD, PIERRE**
Médecine, Laval
Analyse cellulaire et moléculaire des potentialités génétiques des tissus régénérateurs de l'amphibien urodèle
1990-91 EP avr 90–mar 91

2616 **SCHLICHTER, LYANNE C.**
Physiology, Toronto
Role of ion channels in cell-mediated cytotoxicity
1990-91 EP Jul 90–Mar 91

2617 **SCHWEIZER, HERBERT P.**
Microbiology and Infectious Diseases, Calgary
Regulation of microbial glycerol metabolism
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2618 **SEGUIN, CARL**
Physiologie, Laval
Gene expression in the neuroectoderm of the vertebrates
1990-91 EP avr 90–mar 91

2619 **SEKALY, RAFICK-P.**
Microbiologie et immunologie, Montréal
Molecular analysis of the T cell receptor assembly and function
1990-91 EP avr 90–mar 91

2620 **SEMBA, KAZUE**
Anatomy, Dalhousie
Development and organization of afferent innervation of the cerebral cortex
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $30,000
1990-91 EP Apr 90–Mar 91

2621 **SHEFCHYK, SUSAN J.**
Medicine, Manitoba
Investigation of the sacral neuronal organization involved in the coordination of bladder detrusor muscle and external urethral sphincter muscle activity during micturition
1990-91 EP Apr 90–Mar 91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2622 **SILVIUS, JOHN R.**
Biochemistry, McGill
Fusion of lipid vesicle and cellular membranes
1990-91 EP Apr 90–Jun 90

2623 **SIMS, STEPHEN M.**
Physiology, Western Ontario
Patch clamp studies of membrane currents in single smooth muscle cells and their regulation by neurotransmitters
1990-91 EP Apr 90–Mar 91

2624 **SRIKANT, COIMBATORE B.**
Medicine, McGill
Studies on the mechanism of action of somatostatin
1990-91 EP Apr 90–Jun 90

2625 **STAINES, WILLIAM A.**
Anatomy, Ottawa
Circuitry of the basal ganglia and of the tuberomammillary nucleus
1990-91 EP Apr 90–Mar 91

2626 **STEVENSON, BRUCE R.**
Anatomy and Cell Biology, Alberta
Molecular dynamics of ZO-1 and the tight junction
1990-91 EP Apr 90–Mar 91

2627 **STEWART, RICHARD C.**
Microbiology and Immunology, McGill
Molecular mechanism of bacterial chemotaxis
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2628 **SUN, YING**
Pharmacy, Memorial University of Newfoundland
Non-invasive transdermal delivery of peptide/protein drugs (insulin) by iontophoresis and phonophoresis
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2629 **TEMPLETON, DOUGLAS M.**
Clinical Biochemistry, Toronto
The interaction of metals with the renal glomerulus and the cellular redox cycling of metals and oxygen radicals
1990-91 EP Apr 90–Jun 90

2630 **TETZLAFF, WOLFRAM G.**
Anatomy, Calgary
Gene expression in lesioned neurons of the central nervous system and the peripheral nervous system
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jul 90–Mar 91

2631 **TILCOCK, COLIN P.S.**
Radiology, British Columbia
Liposomal contrast agents for magnetic resonance imaging
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Apr 90–Mar 91

2632 **TSANG, S. SING**
Medical Genetics, British Columbia
Susceptibility of Gardner's syndrome and familial polyposis coli fibroblasts to transformation by ras oncogenes and chemical mutagenesis of human ras proto-oncogenes
1990-91 EP Apr 90–Mar 91

2633 **TSAO, MING-SOUND**
Pathology, McGill
Transforming growth factors in chemical-induced neoplastic transformation of rat hepatic epithelial cells
1990-91 EP Apr 90–Mar 91

2634 **TWEED, DOUGLAS B.**
Physiology, Western Ontario
Control of eye movements in three dimensions
1990-91 expenditure breakdown: in addition to the investigator's salary, a research allowance of $15,000
1990-91 EP Jan 91–Mar 91

2635 **VEILLETTE, ANDRE**
Medicine, McGill
Analysis of the lymphocyte-specific tyrosine kinase (p56lck)
1990-91 EP Apr 90–Mar 91

2636 **VIELKIND, JUERGEN R.**
Pathology, British Columbia
Hereditary melanoma formation in fish: a model system for studying a novel class of proto-oncogenes and anti-oncogenes
1990-91 EP Apr 90–Sep 90

2637 **WALLACE, JOHN L.**
Medical Physiology, Calgary
Mechanisms of gastrointestinal damage, protection and repair
1990-91 EP Apr 90–Mar 91

2638 **WEISS, SAMUEL**
Pathology, Calgary
Excitatory amino acid receptor systems in striatal neurons in primary culture
1990-91 EP Apr 90–Mar 91

2639 **WILLIAMS, DAVID B.**
Biochemistry, Toronto
Studies on the mechanisms regulating the glycosylation, intracellular transport, and surface expression of plasma membrane glycoproteins
1990-91 EP Apr 90–Mar 91

2640 **WONG, NORMAN C.-W.**
Medicine, Calgary
Mechanisms of thyroid hormone action
1990-91 EP Apr 90–Mar 91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

2641 **WU, GILLIAN E.**
Immunology, Toronto
Molecular characterization of B cell development
1990-91 EP Apr 90–Mar 91

2642 **YONG, VOON WEE**
Neurology and Neurosurgery, McGill
Induction of oligodendrocyte proliferation and process formation
1990-91 EP Apr 90–Mar 91

2643 **ZINGG, HANS H.**
Medicine, McGill
Regulation of neuropeptide gene expression
1990-91 EP Apr 90–Mar 91

University-Industry Scholarships/ Chercheurs-boursiers université-industrie

Total value (MRC only)/valeur totale (CRM seulement): $268,650 1990-91

2644 **CUSSON, JEAN R.**
Pharmacologie, Montréal
Non modulator hypertensive patients are hyporesponsive to atrial natriuretic factor
1990-91 ventilation des dépenses: programme conjoint de bourses avec la Fondation ACIM pour la recherche en sciences de la santé (Ottawa)
1990-91 EP avr 90–mar 91

2645 **DORIAN, PAUL**
Medicine, Toronto
Determinants of cardiac defibrillation; digoxin-cyclosporine interaction; effect of ACE inhibition with enalapril on cardiac electrophysiology, ventricular arrhythmia, and neurohumoral activation in patients with chronic congestive heart failure
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Apr 90–Mar 91

2646 **HALL, RICHARD I.**
Anesthesia, Dalhousie
The role of hypothermia and cardiopulmonary bypass in altering fentanyl and enflurane anesthesia
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Apr 90–Mar 91

2647 **HERMAN, ROBERT J.**
Pharmacology, Saskatchewan
Glucuronidation and enterohepatic recirculation of lorazepam and diazepam in man and dogs
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Jul 90–Mar 91

2648 **KUS, TERESA K.**
Pharmacologie, Montréal
Mechanism of antiarrhythmic drug action against reentry arrhythmias; clinical studies of the excitable gap phenomenon of ventricular tachycardia; effects of congestive heart failure on the pharmacokinetics and metabolism of propafenone; effects of autonomic nervous system activation on antiarrhythmic drug and on pacemaker antitachycardia program effectiveness
1990-91 ventilation des dépenses: programme conjoint de bourses avec la Fondation ACIM pour la recherche en sciences de la santé (Ottawa)
1990-91 EP jlt 90–mar 91

2649 **LEEDER, J. STEVEN**
Pediatrics, Toronto
Mechanisms and models of idiosyncratic drug reactions
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Jul 90–Mar 91

2650 **POLLAK, P. TIMOTHY**
Medicine, Dalhousie
Effects of amiodarone on serum lipids and pulmonary function and their relationship to pharmacokinetics
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Jul 90–Mar 91

2651 **REEVES, RICHARD A.**
Medicine, Toronto
The role of the sympathetic nervous system in hypertension; antihypertensive drugs, particularly sympatholytic drugs; diagnostic decision-making in mild hypertension
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Apr 90–Mar 91

2652 **RIEDER, MICHAEL J.**
Pediatrics, Western Ontario
Pathogenesis and immunologic effects of adverse reactions to sulphonamides
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Jul 90–Mar 91

2653 **SEBALDT, ROLF-J.**
Medicine, McMaster
Sources and fates of lipid signal and inflammatory mediators
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Apr 90–Mar 91

List No.	Grant/Award	Financial History

Clinician-Scientist Fellowships/Bourses de clinicien-chercheur

Total value/valeur totale: $682,245 1990-91

2654 **ARELLANO, L.-RAMIRO J., MD** — $ 18,350/89-90, 44,850/90-91
(BRYAN, A. CHARLES)
Anesthesia, Toronto
The effects of anesthesia on neural ionic channels
1990-91 EP Apr 90–Mar 91

2655 **ATKINS, HAROLD L., MD** — $ 43,350/89-90, 34,850/90-91
(ISCOVE, NORMAN N.)
Medical Biophysics, Toronto
The regulation of erythropoiesis and hematopoiesis
1990-91 EP Jul 90–Mar 91

2656 **BARR, JOSEPH, MD** — $ 34,850/90-91
(SHULMAN, MARC J.)
Immunology, Toronto
The genetic engineering of chimeric monoclonal antibodies by homologous recombination
1990-91 EP Jul 90–Mar 91

2657 **DYCK, J. BARRY, MD** — $ 33,350/89-90, 45,183/90-91
(STANSKI, DONALD R.)
(SHAFER, STEVEN L.)
Anesthesia, Stanford
The EEG as a predictor of hemodynamic response
1990-91 EP Jun 90–May 91

2658 **EIDELMAN, FRANK J., MD** — $ 34,850/90-91
(STANNERS, CLIFFORD P.)
(FUKS, ABRAHAM)
Cancer Centre, McGill
Molecular studies on the role of carcinoembryonic antigen in metastasis
1990-91 EP Jul 90–Mar 91

2659 **GOUDREAU, GUY, MD** — $ 32,050/89-90, 44,850/90-91
(JOLICOEUR, PAUL)
Institut de recherches cliniques de Montréal
Etudes moléculaires d'une maladie du système nerveux central (maladie des motoneurones) causée par un rétrovirus
1990-91 EP avr 90–mar 91

2660 **GUHA, ABHIJIT, MD** — $ 23,401/89-90, 45,350/90-91
(SARID, JACK)
(WAGNER, JOHN A.)
(BLACK, PETER MCL.)
Brigham and Women's Hospital (Boston)
Oncogene action in neural cells
1990-91 EP Jul 90–Jun 91

2661 **JASMIN, LUC, MD, PhD** — $ 24,350/90-91
(BASBAUM, ALLAN I.)
Anatomy, California (San Francisco)
Opioid peptide regulation of noxious stimulus-evoked expression of c-fos in spinal cord
1990-91 EP Dec 90–May 91

N° de liste	Subvention/Bourse	Résumé financier

2662 **JOFFE, A. MARK, MD** — $ 33,350/89-90, 56,420/90-91
(FALKOW, STANLEY)
Medical Microbiology, Stanford
Pathogenesis of Bordetella pertussis and mechanisms of adhesion in Hemophilus influenzae; mechanisms of adhesion, invasion and intracellular replication in Salmonella and Yersinia
1990-91 EP Apr 90–Jun 91

2663 **LEWANCZUK, RICHARD Z., MD** — $ 34,850/90-91
(PANG, PETER K.T.)
Physiology, Alberta
Parathyroid hypertensive factor: a novel circulating factor in human and experimental hypertension
1990-91 EP Jul 90–Mar 91

2664 **LOZANO, ANDRES M., MD, PhD** — $ 13,850/90-91
(RODER, JOHN C.)
Medical Genetics, Toronto
Molecular determinants of regeneration in the injured mammalian central nervous system
1990-91 EP Jan 91–Mar 91

2665 **MATTHEWS, PAUL M., PhD, MD** — $ 46,575/90-91
(BROWN, GARRY)
(CRAIG, IAN)
Biochemistry, Oxford
Identification of nuclear-encoded factors for mitochondrial biogenesis in human myoblasts
1990-91 EP Jul 90–Jun 91

2666 **PETROF, BASIL J., MD** — $ 45,350/90-91
(PACK, ALLAN I.)
Medicine, Pennsylvania
Neuromotor control and adaptation of respiratory muscles in sleep-disordered breathing
1990-91 EP Jul 90–Jun 91

2667 **TOUGAS, GERVAIS, MD** — $ 33,350/89-90, 44,850/90-91
(COLLINS, STEPHEN M.)
(DANIEL, EDWIN E.)
Biomedical Sciences, McMaster
Colonic motor activity and inflammation
1990-91 EP Apr 90–Mar 91

2668 **WATSON, PETER H., MBBCh** — $ 41,517/90-91
(SHIU, ROBERT P.C.)
Physiology, Manitoba
Molecular biology of estrogen action in human breast cancer
1990-91 EP May 90–Mar 91

2669 **WING, SIMON S., MD** — $ 44,850/90-91
(THOMAS, DAVID Y.)
(BANVILLE, DENIS)
Biology, McGill
Function and regulation of ubiquitin-dependent protein degradation
1990-91 EP Apr 90–Mar 91

2670 **ZANKE, BRENT W., MD** — $ 33,731/89-90, 44,850/90-91
(MAK, TAK W.)
Medical Biophysics, Toronto
Translocations involving T cell receptor genes in T cell malignancies
1990-91 EP Apr 90–Mar 91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

Centennial Fellowships/Bourses du Centenaire

Total value/valeur totale: $1,160,907 1990-91

2671 **ARAUJO, DALIA M., PhD** — $ 25,950/89-90, 42,886/90-91
(COTMAN, CARL W.)
Psychobiology, California (Irvine)
Synaptic plasticity in the mammalian hippocampus
1990-91 EP Jun 90–May 91

2672 **BACKX, PETER H., DVM, PhD** — $ 35,037/89-90, 46,402/90-91
(MARBAN, EDUARDO)
Medicine, Johns Hopkins
Regulation of human cardiac sodium and calcium channels
1990-91 EP Jun 90–May 91

2673 **BOUTIN, JEAN-MARIE, MD, PhD** — $ 45,638/89-90, 46,231/90-91
(ROSENFELD, MICHAEL G.)
California (San Diego)
Identification of cell-specific factors required for retinoic acid receptor function
1990-91 EP May 90–Apr 91

2674 **COULDWELL, WILLIAM T., MD** — $ 35,769/90-91
(ANTEL, JACK P.)
(YONG, VOON WEE)
Neurology and Neurosurgery, McGill
Gliomas and the immune system
1990-91 EP Jul 90–Mar 91

2675 **COULOMBE, PIERRE A., PhD** — $ 37,784/89-90, 39,465/90-91
(FUCHS, ELAINE V.)
Molecular Genetics and Cell Biology, Chicago
Mutant keratin cDNAs in bacteria and transgenic mice: filament assembly and genetic disease
1990-91 EP May 90–Apr 91

2676 **EKKER, MARC, PhD** — $ 39,384/89-90, 39,465/90-91
(WESTERFIELD, MONTE)
Biology, Oregon (Eugene)
Genes coding for surface proteins that guide motoneurone growth cones in zebra fish embryos
1990-91 EP May 90–Apr 91

2677 **FRIEND, WILLIAM C., MD** — $ 44,119/89-90, 46,060/90-91
(MARKS, ALEXANDER)
(RODER, JOHN C.)
Medical Genetics, Toronto
Development of a model system for overexpression of the gene encoding brain protein S-100
1990-91 EP Apr 90–Mar 91

2678 **GERMAIN, LOUIS, MD** — $ 44,119/89-90, 46,060/90-91
(LAMARRE, YVES)
Physiologie, Montréal
Etudes de l'activité des cellules poly-modales de la fissure intra-pariétale pendant le mouvement volontaire chez le singe
1990-91 EP avr 90–mar 91

2679 **HIMMELFARB, HOWARD J., PhD** — $ 39,464/90-91
(PTASHNE, MARK S.)
Biochemistry and Molecular Biology, Harvard
A genetic approach to define the target proteins of transcriptional activators
1990-91 EP May 90–Apr 91

2680 **KARAPLIS, ANDREW C., MD, PhD** — $ 44,626/89-90, 46,402/90-91
(KRONENBERG, HENRY M.)
Medicine, Harvard
Regulation of parathyroid hormone gene transcription
1990-91 EP Jun 90–May 91

2681 **KAY, LEWIS E., PhD** — $ 39,536/90-91
(BAX, ADRIAAN)
NIDDK (Bethesda)
The development and application of novel 2D and 3D nuclear magnetic resonance techniques for the study of protein structure, function and dynamics
1990-91 EP Jun 90–May 91

2682 **LIBRACH, CLIFFORD L., MD** — $ 57,760/89-90, 32,418/90-91
(JAFFE, ROBERT B.)
Obstetrics, Gynecology, and Reproductive Sciences, California (San Francisco)
Studies concerned with invasion of the developing trophoblast into the uterus
1990-91 EP Jul 90–Mar 91

2683 **LOBE, CORRINNE G., PhD** — $ 37,784/89-90, 39,465/90-91
(GRUSS, PETER)
Max-Planck-Inst. Biophysical Chemistry (Gottingen)
Analysis of the murine homeobox-containing gene, Hox 1.3
1990-91 EP May 90–Apr 91

2684 **LORRAIN, DOMINIQUE, PhD** — $ 32,312/90-91
(VAN DER LINDEN, MARTIAL)
Psychologie, Université catholique de Louvain
Facteur d'optimisation des performances mnésiques chez les patients Alzheimer
1990-91 EP oct 90–jui 91

2685 **MELOCHE, SYLVAIN, PhD** — $ 21,515/90-91
(POUYSSEGUR, JACQUES)
Biochimie, Nice
Voies de transduction de la réponse mitogénique: le cas de la thrombine
1990-91 EP déc 90–mai 91

2686 **NISHIMURA, ERICA, PhD** — $ 37,950/89-90, 39,680/90-91
(MONTMINY, MARC R.)
(VALE, WYLIE W.)
Salk Institute (La Jolla)
cDNA cloning of bovine pituitary corticotropin-releasing factor receptor
1990-91 EP Jul 90–Jun 91

2687 **OVERALL, CHRISTOPHER M., BDS, PhD** — $ 34,224/89-90, 46,060/90-91
(SMITH, MICHAEL)
Biochemistry, British Columbia
Protein structure-function analysis by in vitro mutagenesis
1990-91 EP Apr 90–Mar 91

List No.	Grant/Award	Financial History
2688	**RIDGWAY, NEALE D., PhD** **(GOLDSTEIN, JOSEPH L.)** *Molecular Genetics, Texas (Dallas)* Structure-function studies on oxysterol binding protein **1990-91 EP Jun 90–May 91**	$ 39,536/90-91
2689	**RINI, JAMES M., PhD** **(WILSON, IAN A.)** *Scripps Clinic and Research Foundation (La Jolla)* X-ray structural studies of a viral antigen **1990-91 EP Jun 90–Nov 90**	$ 20,650/89-90 18,095/90-91
2690	**SADELAIN, MICHEL W.J., MD, PhD** **(MULLIGAN, RICHARD C.)** *Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology* Genetic therapy for diseases affecting hemoglobin production **1990-91 EP May 90–Apr 91**	$ 45,040/89-90 46,316/90-91
2691	**SALTER, MICHAEL W., MD, PhD** **(ROACH, ARTHUR H.)** **(RODER, JOHN C.)** *Medical Genetics, Toronto* Regulation of preprotachykinin (substance P) gene expression **1990-91 EP Apr 90–Jun 90**	$ 27,363/89-90 10,291/90-91
2692	**SCHUH, ANDRE C., MD** **(BREITMAN, MARTIN L.)** *Medical Genetics, Toronto* Genetic ablation of B and T cells in transgenic mice **1990-91 EP Apr 90–Mar 91**	$ 44,119/89-90 46,060/90-91
2693	**SHWORAK, NICHOLAS W., MD, PhD** **(ROSENBURG, ROBERT D.)** *Biology, Massachusetts Institute of Technology* Molecular biology of blood vessel wall heparan sulfate proteoglycans **1990-91 EP Sep 90–May 91**	$ 37,076/90-91
2694	**TKACHUK, DOUGLAS C., MD** **(CLEARY, MICHAEL L.)** *Pathology, Stanford* Molecular features of chromosomal translocations in acute leukemias **1990-91 EP Jul 90–Jun 91**	$ 45,075/89-90 46,574/90-91
2695	**TOLIAS, PETER P., PhD** **(KAFATOS, FOTIS C.)** *Cellular and Developmental Biology, Harvard* Regulation of chorion gene expression in Drosophila and the medfly **1990-91 EP May 90–Apr 91**	$ 39,393/90-91
2696	**TRIMBLE, WILLIAM S., PhD** **(SCHELLER, RICHARD H.)** *Biological Sciences, Stanford* Molecular biology of synaptic vesicle proteins **1990-91 EP Jul 90–Dec 90**	$ 20,650/89-90 18,237/90-91
2697	**TURCOTTE, BERNARD, PhD** **(GUARENTE, LEONARD)** *Biology, Massachusetts Institute of Technology* Heme regulation of DNA binding of the yeast activator, HAP1 **1990-91 EP Aug 90–Apr 91**	$ 29,078/89-90 31,443/90-91
2698	**TURNER, RAYMOND W., PhD** **(MALER, LEONARD)** *Anatomy, Ottawa* Physiology and anatomy of CNS electroreceptive nuclei in gymnotid teleosts **1990-91 EP Apr 90–Mar 91**	$ 37,618/89-90 39,248/90-91
2699	**VANNER, STEPHEN J., MD** **(SURPRENANT, ANNMARIE)** *Vollum Institute for Advanced Biomedical Research, Oregon Health Sciences University (Portland)* Vasomotor and secretomotor neurons in the gastrointestinal tract **1990-91 EP Jul 90–Jan 91**	$ 30,665/90-91
2700	**WREGGETT, KEITH A., PhD** **(BERRIDGE, MICHAEL J.)** *Zoology, Cambridge* Elucidation of the inositide-signalling pathway using DNA recombination techniques **1990-91 EP May 90–Apr 91**	$ 37,728/89-90 39,391/90-91
2701	**YEE, SIU-POK, PhD** **(RIGBY, PETER W.J.)** *National Inst. for Medical Research (London, Eng.)* Regulation of gene expression during early mouse embryogenesis **1990-91 EP May 90–Apr 91**	$ 38,564/89-90 39,392/90-91

Fellowships/Bourses de recherche

Total value/valeur totale: $13,224,465 1990-91.

List No.	Grant/Award	Financial History
2702	**ABDOLLAH, AZAD, MD** **(FISHMAN, MARK C.)** *Massachusetts General Hospital (Boston)* Regulatory elements of the GAP-43 gene **1990-91 EP Sep 90–May 91**	$ 28,668/90-91
2703	**ABECASSIS, MICHAEL M.I., MD** **(STEINMULLER, DAVID)** **(CORRY, ROBERT J.)** *Surgery, Iowa* Tissue destruction induced by cytomegalovirus-specific cytotoxic T cells **1990-91 EP Jul 90–Jun 91**	$ 43,489/90-91
2704	**ACKLIN-GRANT, SUSAN E., PhD** **(VAN DER KOOY, DEREK J.)** *Anatomy, Toronto* Pattern formation in the developing mammalian brain **1990-91 EP Feb 91–Mar 91**	$ 5,936/90-91

List No.	Grant/Award	Financial History
2705	**AFZAL, M. NASIR, MBBS** **(DHALLA, NARANJAN S.)** ***Physiology, Manitoba*** Subcellular defects in congestive heart failure **1990-91 EP Apr 90–Mar 91**	$ 42,153/90-91
2706	**AIRD, WILLIAM C., MD** **(ROSENBERG, ROBERT D.)** ***Biology, Massachusetts Institute of Technology*** Molecular biology of megakaryocyte development **1990-91 EP Jul 90–Jun 91**	$ 40,140/90-91
2707	**AKAI, PETER S., MD** **(BEFUS, A. DEAN)** ***Microbiology and Infectious Diseases, Calgary*** Antigens and human immune response to Opisthorchis viverrini and Clonorchis sinensis **1990-91 EP Apr 90–Mar 91**	$ 29,935/89-90 41,854/90-91
2708	**ANDERSON, GAIL I., BVSc** **(PILLIAR, ROBERT M.)** **(DAVIES, JOHN E.)** ***Dentistry, Toronto*** Consequences of micromovement on cells and healing bone tissue **1990-91 EP Sep 90–Mar 91**	$ 25,418/90-91
2709	**ANTHONY, LAWRENCE S.D., PhD** **(NANO, FRANCIS E.)** ***Biochemistry and Microbiology, Victoria*** Mechanisms of virulence and intracellular killing of Francisella spp. **1990-91 EP Apr 90–Mar 91**	$ 28,682/89-90 30,568/90-91
2710	**ARGUIN, MARTIN, PhD** **(BUB, DANIEL N.)** ***Neurology and Neurosurgery, McGill*** Attention and the processing of ignored times in visual hemineglect **1990-91 EP Jul 90–Mar 91**	$ 20,808/90-91
2711	**ARTHUR, PETER G., PhD** **(HOCHACHKA, PETER W.)** ***Zoology, British Columbia*** The role of oxygen in regulating oxygen uptake in muscles **1990-91 EP Sep 90–Mar 91**	$ 17,526/90-91
2712	**ATTISANO, LILIANA, PhD** **(MASSAGUE, JOAN)** ***Cell Biology, Cornell*** Growth inhibitory transforming growth factor-beta signal transduction **1990-91 EP Nov 90–Apr 91**	$ 14,510/90-91
2713	**AULD, VANESSA J., PhD** **(GOODMAN, COREY S.)** ***Molecular and Cell Biology, California (Berkeley)*** Molecular genetics of immunoglobulin-like molecules during neuronal development **1990-91 EP Jul 90–Jun 91**	$ 14,081/89-90 28,265/90-91
2714	**BAIN, VINCENT G., MD** **(TYRRELL, DAVID L.J.)** ***Medical Microbiology and Infectious Diseases, Alberta*** Antiviral therapy for hepatitis B virus **1990-91 EP Apr 90–Sep 90**	$ 33,449/89-90 20,180/90-91
2715	**BALEJA, JAMES D., PhD** **(WAGNER, GERHARD)** ***Biological Chemistry, Michigan*** Development and application of homonuclear and heteronuclear techniques to studies of proteins **1990-91 EP May 90–Apr 91**	$ 27,480/90-9
2716	**BARIBAULT, HELENE, PhD** **(OSHIMA, ROBERT G.)** ***La Jolla Cancer Research Foundation*** Inactivation of cytokeratin gene in transgenic mice **1990-91 EP Jul 90–Jun 91**	$ 23,041/89-90 30,979/90-91
2717	**BARSS, PETER G., MD** **(SMITH, GORDON S.)** ***Health Policy and Management, Johns Hopkins*** Epidemiology and prevention of injuries in isolated populations **1990-91 EP Jul 90–Dec 90**	$ 40,675/89-90 21,973/90-91
2718	**BELHUMEUR, PIERRE, PhD** **(CLARK, MICHAEL W.)** ***Biology, McGill*** Analysis of rpr20 gene expression in S. cerevisiae and its mechanism of regulation **1990-91 EP Jul 90–Mar 91**	$ 27,908/89-90 23,333/90-91
2719	**BENDER, ALEXANDER S., PhD** **(NORENBERG, MICHAEL D.)** ***Pathology, Miami*** Role of astrocytes in pH homeostasis **1990-91 EP Jul 90–Jun 91**	$ 27,790/89-90 30,920/90-91
2720	**BENYON, R. CHRISTOPHER, PhD** **(BEFUS, A. DEAN)** ***Microbiology and Infectious Diseases, Calgary*** Mechanisms of human mast cell cytotoxicity **1990-91 EP Apr 90–Mar 91**	$ 27,678/89-90 32,006/90-91
2721	**BERGSAGEL, D. JOHN, MD** **(GARCEA, ROBERT L.)** ***Pediatrics, Harvard*** The role of human papovaviruses in pediatric malignancies **1990-91 EP Jul 90–Jun 91**	$ 39,480/89-90 42,645/90-91
2722	**BERTRAM, JOHN E.A., PhD** **(HALL, BRIAN K.)** ***Biology, Dalhousie*** Mechanical loading influences on limb bone morphogenesis **1990-91 EP Apr 90–Aug 90**	$ 26,835/89-90 11,258/90-91
2723	**BEST, THOMAS M., MD** **(GARRETT, WILLIAM E., JR.)** **(MCELHANEY, JAMES)** ***Biomedical Engineering, Duke*** Biomechanics and pathology of muscle stretch and injury **1990-91 EP Jul 90–Jun 91**	$ 28,745/89-90 32,620/90-91

List No.	Grant/Award	Financial History
2724	**BIANCHI FILHO, CESARIO, MD, PhD** **(HOMCY, CHARLES J.)** ***Medicine, Harvard*** Mammalian expression cloning of an angiotensin II receptor **1990-91 EP Jul 90–Jun 91**	$ 40,077/89-90 42,645/90-91
2725	**BLADON, TREVOR S., PhD** **(MCBURNEY, MICHAEL W.)** ***Medicine, Ottawa*** The role of RNA polymerase III transcripts in development and cancer **1990-91 EP Apr 90–Mar 91**	$ 29,239/89-90 30,568/90-91
2726	**BODRUG, SHARON E., PhD** **(ADAMS, JERRY M.)** ***Royal Melbourne Hospital*** Role of anti-oncogenes in hematological malignancies **1990-91 EP Mar 91–May 91**	$ 8,190/90-91
2727	**BOISCLAIR, YVES R., PhD** **(RECHLER, MATTHEW M.)** ***NIDDK (Bethesda)*** Physiology and role of insulin-like growth factors **1990-91 EP Jan 91–Jun 91**	$ 14,790/90-91
2728	**BOISSINOT, MAURICE, PhD** **(GETZOFF, ELIZABETH D.)** ***Scripps Clinic and Research Foundation (La Jolla)*** Protein engineering of Cu,Zn superoxide dismutase **1990-91 EP Jul 90–Jun 91**	$ 29,114/90-91
2729	**BOISSONADE, FIONA M., PhD** **(LUCIER, GREGORY E.)** ***Medical Physiology, Calgary*** Characterization of trigeminal brainstem neurons involved in oral-facial pain **1990-91 EP Apr 90–Mar 91**	$ 15,912/89-90 40,146/90-91
2730	**BOMAN, NANCY L., MD** **(CULLIS, PIETER R.)** ***Biochemistry, British Columbia*** Liposomal vincristine systems: optimization and mechanism of action **1990-91 EP Apr 90–Mar 91**	$ 28,629/90-91
2731	**BONET-KERRACHE, ARMELLE A., PhD** **(WALSH, MICHAEL P.)** • ***Medical Biochemistry, Calgary*** Analysis of interactions between smooth muscle contractile and regulatory proteins **1990-91 EP Apr 90–Mar 91**	$ 13,685/89-90 27,903/90-91
2732	**BOUCHARD, RONALD A., PhD** **(GILES, WAYNE R.)** ***Medical Physiology, Calgary*** Effects of intracellular pH on K+ currents in mammalian heart **1990-91 EP Sep 90–Mar 91**	$ 15,594/90-91
2733	**BOUCHER, ANDREE, MD** **(WALL, JACK R.)** ***Medicine, McGill*** Cross-reactivity against thyroid and muscle shared epitopes **1990-91 EP Apr 90–Mar 91**	$ 30,831/89-90 42,153/90-91
2734	**BOUVIER, CLAUDIA, PhD** **(CIVELLI, OLIVIER)** ***Vollum Institute for Advanced Biomedical Research, Oregon Health Sciences University (Portland)*** Etude des deux types de recepteurs dopaminergiques D2 **1990-91 EP oct 90–jui 91**	$ 21,598/90-91
2735	**BOYER, MICHAEL J., MBBS** **(TANNOCK, IAN F.)** ***Medicine, Toronto*** Regulation of intracellular pH as a target for cancer therapy **1990-91 EP Apr 90–Mar 91**	$ 10,225/89-90 39,886/90-91
2736	**BRASSEUR, NICOLE M., PhD** **(LENAERTS, VINCENT)** ***Pharmacie, Montréal*** Mise au point de formulations d'hématoporphyrine fixée à des nanosphères polymériques biodégradables **1990-91 EP jui 90–déc 90**	$ 30,152/89-90 17,858/90-91
2737	**BRIONES-URBINA, ROSARIO, MD, PhD** **(GEORGE, SUSAN R.)** ***Pharmacology, Toronto*** Corticotropin releasing factor interactions in the regulation of appetite **1990-91 EP Apr 90–Mar 91**	$ 4,581/89-90 42,153/90-91
2738	**BRITTON, ANN P., DVM** **(MOON, YOUNG S.)** ***Obstetrics and Gynecology, British Columbia*** Human reproductive biology **1990-91 EP Apr 90–May 90**	$ 38,922/89-90 6,363/90-91
2739	**BROWMAN, HOWARD I., PhD** **(HAWRYSHYN, CRAIG W.)** ***Biology, Victoria*** Development of the cone mosaic: anatomical and electrophysiological correlates **1990-91 EP Aug 90–Mar 91**	$ 21,396/90-91
2740	**BROWN, CHRISTOPHER B., MD** **(HARLAN, JOHN M.)** ***Medicine, Washington (Seattle)*** Structure/function of granulocyte-macrophage colony-stimulating factor and interleukin-3 **1990-91 EP Jul 90–Jun 91**	$ 42,644/90-91
2741	**BROWNSTONE, ROBERT M., MD, PhD** **(HULTBORN, HANS)** ***Neurophysiology, Copenhagen*** Study of the spinal neuronal network generating the basic pattern of locomotion **1990-91 EP Aug 90–Apr 91**	$ 26,419/90-91
2742	**BURCZYNSKI, FRANK J., PhD** **(WEISIGER, RICHARD A.)** ***Medicine, California (San Francisco)*** Electrochemical forces driving the hepatic clearance of cationic drugs **1990-91 EP May 90–Apr 91**	$ 31,3[illegible]/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2743	**BURNS, KEVIN D., MD** **(HARRIS, RAYMOND C.)** **(JACOBSON, HARRY R.)** ***Medicine, Vanderbilt*** Role of angiotensin II in the regulation of proximal tubule function **1990-91 EP Jul 90–Jun 91**	$ 38,404/89-90 41,390/90-91
2744	**CAMPBELL, ROBERT M., MD** **(PETERSON, ALAN C.)** ***Medicine, McGill*** Insertional mutagenesis of the dt locus by a transgene expressed in the neural tube **1990-91 EP Apr 90–Mar 91**	$ 32,331/89-90 36,286/90-91
2745	**CAPADAY, CHARLES, PhD** **(FETZ, EBERHARD E.)** ***Physiology and Biophysics, Washington (Seattle)*** Intracortical processing of neural activity within the motor cortex **1990-91 EP May 90–Apr 91**	$ 22,948/89-90 30,685/90-91
2746	**CARMICHAEL, ROBERT P., DMD** **(ZARB, GEORGE A.)** **(MCCULLOCH, CHRISTOPHER A.G.)** ***Dentistry, Toronto*** Proliferative behaviour of mouse oral epithelial cell populations **1990-91 EP Apr 90–Dec 90**	$ 40,296/89-90 31,816/90-91
2747	**CARTER, DAVID A., MD** **(AGUAYO, ALBERT J.)** ***Montreal General Hospital*** Regenerational synaptogenesis in the adult mammalian central nervous system **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
2748	**CARTER, RONALD F., DVM, PhD** **(DUBE, IAN D.)** ***Pathology, Toronto*** Canine model of autologous marrow transplantation using long-term culture cells **1990-91 EP Apr 90–Jun 90**	$ 38,479/89-90 9,545/90-91
2749	**CARVALHO, ROBERTO S., DDS** **(SCOTT, PAUL G.)** ***Dentistry, Alberta*** Proteoglycan synthesis by cells of the articular disc of the temporomandibular joint **1990-91 EP Oct 90–Mar 91**	$ 18,399/90-91
2750	**CASSON, ALAN G., MBChB** **(ROTH, JACK A.)** ***Thoracic Surgery, Texas (Houston)*** Evaluation of immunotoxin efficacy **1990-91 EP Jul 90–Jan 91**	$ 40,675/89-90 25,532/90-91
2751	**CHAKRABARTTY, AVIJIT, PhD** **(BALDWIN, ROBERT L.)** ***Biochemistry, Stanford*** Sidechain H-bonds at the end of alpha-helices **1990-91 EP Jun 90–May 91**	$ 8,645/89-90 27,658/90-91
2752	**CHAMPAGNE, MARIE-JOSEE, DMV** **(HIGGINS, ROBERT)** ***Médecine vétérinaire, Montréal*** Etude de la leptospirose porcine au Québec **1990-91 EP avr 90–jlt 90**	$ 27,707/89-90 9,262/90-91
2753	**CHAN, AGNES H.-C., PhD** **(MAK, TAK W.)** ***Immunology, Toronto*** The role of T cell receptor gene in autoimmunity **1990-91 EP Apr 90**	$ 27,328/89-90 3,311/90-91
2754	**CHAN, BOSCO M.C., PhD** **(HEMLER, MARTIN E.)** ***Pathology, Harvard*** Molecular basis for the structure-functional multiplicity of VLA-2 **1990-91 EP Jun 90–May 91**	$ 28,070/89-90 29,510/90-91
2755	**CHARRON, JEAN, PhD** **(ALT, FREDERICK W.)** ***Biochemistry and Molecular Biophysics, Columbia*** Use of homologous recombination to study function of N-myc and retinoblastoma genes **1990-91 EP Jul 90–Sep 90**	$ 29,081/89-90 7,405/90-91
2756	**CHEN, BEIYUN, BM** **(HALES, BARBARA F.)** ***Pharmacology and Therapeutics, McGill*** Gene expression in normal and abnormal embryo development **1990-91 EP Jul 90–Mar 91**	$ 28,548/90-91
2757	**CHEN, SUIRONG (WING), PhD** **(MACLENNAN, DAVID H.)** ***Banting and Best Department of Medical Research, Toronto*** Structure/function relationships in the ryanodine receptor **1990-91 EP Sep 90–Mar 91**	$ 16,473/90-91
2758	**CHEN, YOUHAI, MD** **(SEHON, ALEC H.)** ***Immunology, Manitoba*** Induction of adult tolerance by modified antigens **1990-91 EP Apr 90–Mar 91**	$ 42,153/90-91
2759	**CHENG, HEUNG-CHIN, PhD** **(WANG, JERRY H.)** ***Medical Biochemistry, Calgary*** Structural determinants of protein tyrosine kinase substrates **1990-91 EP Apr 90–Mar 91**	$ 17,756/89-90 30,568/90-91
2760	**CHOW, LAWRENCE H., MD** **(MCMANUS, BRUCE M.)** ***Pathology and Microbiology, Nebraska*** Cardiac immunology **1990-91 EP May 90–Jun 90**	$ 40,422/89-90 6,562/90-91
2761	**CHRISTOFI, FEDIAS L., PhD** **(WOOD, JACKIE D.)** ***Physiology, Ohio State*** Nucleoside regulation of electrical behavior of myenteric neurons **1990-91 EP May 90–Apr 91**	$ 19,878/89-90 28,456/90-91

List No.	Grant/Award	Financial History
2762	**CHUNG, STEPHEN W., MD** **(NISBET-BROWN, ERIC R.)** **(LEVY, GARY A.)** ***Medicine, Toronto*** Role of helper and suppressor/cytotoxic T cells in murine hepatitis virus strain 3 infection **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
2763	**CLARK, DENISE V., PhD** **(HENIKOFF, STEVEN)** ***Fred Hutchinson Cancer Research Center (Seattle)*** Organization of Gart locus genes in Chironomus and Manduca **1990-91 EP Apr 90–Jun 91**	$ 35,255/90-91
2764	**COCKFIELD, SANDRA M., MD** **(HALLORAN, PHILIP F.)** ***Medicine, Alberta*** The regulation of major histocompatibility complex products by lymphokines **1990-91 EP Apr 90–Jun 90**	$ 40,009/89-90 9,844/90-91
2765	**CONLON, JENNIFER A., DVM** **(SHEWEN, PATRICIA E.)** ***Veterinary Microbiology and Immunology, Guelph*** Investigation of the protective antigens of Pasteurella haemolytica **1990-91 EP Apr 90–Mar 91**	$ 27,250/89-90 39,080/90-91
2766	**CONLON, RONALD A., PhD** **(ROSSANT, JANET)** ***Medical Genetics, Toronto*** Identification of spatially regulated gene products in the postimplantation mouse embryo **1990-91 EP Jun 90–Mar 91**	$ 23,366/90-91
2767	**CONNELL, GREGORY J., PhD** **(YARUS, MICHAEL)** ***Molecular, Cellular and Developmental Biology, Colorado (Boulder)*** Modification of the specificity of the guanosine/arginine site of the Tetrahymena intron **1990-91 EP Aug 90–Apr 91**	$ 21,390/90-91
2768	**CONNORS, GREGORY T., MD** **(RICHARDSON, BRYAN S.)** ***Obstetrics and Gynecology, Western Ontario*** The study of fetal flow velocimetry and preejection period in relation to behavioural states **1990-91 EP Apr 90–Dec 90**	$ 29,935/89-90 30,691/90-91
2769	**CONWAY, BRIAN, MD** **(HIRSCH, MARTIN S.)** ***Medicine, Harvard*** Pathogenesis of neonatal human immunodeficiency virus infections **1990-91 EP Jun 90–Aug 90**	$ 40,234/89-90 10,172/90-91
2770	**CORNIL, ISABELLE S., DMV** **(LING, VICTOR)** ***Ontario Cancer Institute (Toronto)*** Regulation of expression of the drug-resistant P-glycoprotein genes **1990-91 EP Apr 90–Mar 91**	$ 23,673/89-90 34,123/90-91

N° de liste	Subvention/Bourse	Résumé financier
2771	**COULOMBE, BENOIT, PhD** **(GREENBLATT, JACK F.)** ***Banting and Best Department of Medical Research, Toronto*** Activation of transcription by RNA polymerase II **1990-91 EP May 90–Mar 91**	$ 28,217/90-91
2772	**CRAIG, ANN MARIE, PhD** **(ALKON, DANIEL L.)** ***NINCDS (Bethesda)*** Role of regulation of DNA transcription in learning and memory **1990-91 EP Jun 90–May 91**	$ 20,067/89-90 28,611/90-91
2773	**CRIBB, ALASTAIR E., DVM, PhD** **(RENTON, KENNETH W.)** ***Pharmacology, Dalhousie*** Cyclosporin A metabolism and interactions in children **1990-91 EP Apr 90–May 91**	$ 32,629/89-90 44,373/90-91
2774	**CRIDLAND, RUTH A., PhD** **(KASTING, NORMAN W.)** ***Physiology, British Columbia*** Role of vasopressin as an antipyretic agent in bacterial infection **1990-91 EP Apr 90–Mar 91**	$ 26,706/89-90 29,966/90-91
2775	**CROSS, DAVID P., PhD, MD** **(CAMBIER, JOHN C.)** ***Pediatrics, Colorado (Denver)*** The mechanism of signal transduction by transforming growth factor beta-1 in murine B lymphocytes **1990-91 EP Jul 90–Jun 91**	$ 40,675/89-90 42,644/90-91
2776	**CROSS, JAMES C., DVM** **(ROBERTS, R. MICHAEL)** ***Animal Science, Missouri (Columbia)*** Molecular cloning of porcine embryonic interferon **1990-91 EP May 90–Feb 91**	$ 30,358/89-90 28,612/90-91
2777	**CYBULSKY, MYRON I., MD** **(GIMBRONE, MICHAEL A., JR.)** ***Pathology, Harvard*** Studies of cellular and molecular mechanisms of leukocyte-endothelial adhesion **1990-91 EP Jul 90–Dec 90**	$ 40,077/89-90 20,673/90-91
2778	**DAGENAIS, ANDRE, PhD** **(GAUVREAU, DENIS)** ***INRS (Montréal)*** Expression de la béta-amyloide après transfection dans des cellules neuronales **1990-91 EP *avr* 90–*fév* 91**	$ 27,607/89-90 28,034/90-91
2779	**DALEY, M. DENISE, MD** **(SIMINOVITCH, KATHERINE A.)** ***Medicine, Toronto*** Genetic analysis of autoantibodies **1990-91 EP Apr 90–Mar 91**	$ 29,935/89-90 41,854/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2780	**DAUDI, FAIZ A., MD** **(KNETEMAN, NORMAN M.)** **(WARNOCK, GARTH L.)** **(RAJOTTE, RAYMOND V.)** ***Surgery, Alberta*** Quantification of oxygen-derived free radicals during islet isolation **1990-91 EP Apr 90–Jun 90**	$ 27,250/89-90 8,650/90-91
2781	**DAVIES, PHILIP O., DVM** **(WILLISON, KEITH)** ***Royal Cancer Hospital (London, England)*** Characterization of the t-complex responder locus **1990-91 EP Jul 90–Jun 91**	$ 28,745/89-90 32,620/90-91
2782	**DAVIS, ANN C., DVM, PhD** **(BRADLEY, ALLAN)** ***Molecular Genetics, Baylor*** Gene targeting in embryonic stem cells **1990-91 EP Jul 90–Jun 91**	$ 40,739/89-90 42,727/90-91
2783	**DAVIS, CLAYTUS A., PhD** **(BENZER, SEYMOUR)** ***Biology, California Institute of Technology*** Genes expressed in spatially distinct patterns **1990-91 EP Feb 91–Apr 91**	$ 8,272/90-91
2784	**DAVIS, KAREN D., PhD** **(CAMPBELL, JAMES N.)** ***Neurosurgery, Johns Hopkins*** Neurophysiological and psychophysical studies of pain **1990-91 EP May 90–Apr 91**	$ 27,201/89-90 30,248/90-91
2785	**DAY, ROBERT A., PhD** **(AKIL, HUDA)** **(WATSON, STANLEY J.)** ***Psychiatry, Michigan*** The regulation of pro-enkephalin in the adrenal medulla **1990-91 EP Jun 90–Aug 90**	$ 29,421/89-90 7,288/90-91
2786	**DE BRUM FERNANDES, ARTUR J., MD** **(SIROIS, PIERRE)** ***Pharmacologie, Sherbrooke*** Characterization of leukotriene receptors in the lungs **1990-91 EP avr 90–mar 91**	$ 42,153/90-91
2787	**DE LAUNOIT, YVAN-P., PhD** **(LABRIE, FERNAND)** ***Physiologie, Laval*** Protooncogene expression in prostate cancer **1990-91 EP avr 90–mar 91**	$ 8,988/89-90 27,451/90-91
2788	**DEAL, CHERI L., PhD, MD** **(ROSENFELD, RON G.)** ***Pediatrics, Stanford*** Insulin-like growth factors and the human placenta **1990-91 EP Jul 90–Jun 91**	$ 30,145/89-90 41,078/90-91
2789	**DEBINSKI, WALDEMAR K., MD, PhD** **(PASTAN, IRA H.)** ***National Cancer Institute (Bethesda)*** Construction of hybrid toxins designed to kill cells bearing specific receptors **1990-91 EP Jun 90–Feb 91**	$ 40,549/89-90 30,844/90-91
2790	**DELAGE, ROBERT, MD** **(RITZ, JEROME)** ***Medicine, Harvard*** Utilization of monoclonal antibodies for in vitro treatment prior to bone marrow transplant **1990-91 EP May 90–Oct 90**	$ 38,646/89-90 19,726/90-91
2791	**DELANEY, KERRY R., PhD** **(LLINAS, RODOLFO R.)** ***Physiology and Biophysics, New York*** Molecular mechanisms of synaptic transmission **1990-91 EP Jul 90–Jun 91**	$ 22,806/89-90 30,920/90-91
2792	**DELIKATNY, E. JAMES, PhD** **(MOUNTFORD, CAROLYN E.)** ***Cancer Medicine, Sydney*** Investigation of human biopsy specimens and malignant cultured cells using magnetic resonance spectroscopy **1990-91 EP Jun 90–May 91**	$ 27,706/89-90 30,803/90-91
2793	**DER, JOHN E., MD** **(JIMBOW, KOWICHI)** ***Medicine, Alberta*** Melanosomal protein as a marker for melanocyte differentiation **1990-91 EP Apr 90–Jun 90**	$ 30,831/89-90 9,844/90-91
2794	**DESJARDINS, BENOIT, MD** **(BUCHANAN, BRUCE G.)** **(MILLER, RANDOLPH A.)** ***Computer Science, Pittsburgh*** Reasoning strategies with causal knowledge in medicine **1990-91 EP May 90–Apr 91**	$ 29,884/90-91
2795	**DEVAULT, ALAIN, PhD** **(DOREE, MARCEL)** ***CNRS (Montpellier)*** Role of p34cdc2 in controlling the initiation of DNA replication at the G1 to S phase transition **1990-91 EP jui 90–mai 91**	$ 31,288/90-91
2796	**DIMATTIA, GABRIEL E., PhD** **(ROSENFELD, MICHAEL G.)** ***Medicine, California (San Diego)*** Regulation of morphogenesis by retinoic acid **1990-91 EP Jul 90–Jun 91**	$ 29,050/90-91
2797	**DIXON, IAN M.C., PhD** **(SOLE, MICHAEL J.)** ***Medicine, Toronto*** The molecular genetics of cardiomyopathy **1990-91 EP Aug 90–Mar 91**	$ 19,127/90-91
2798	**DOIZE, FRANCOISE A.C.R., DMV, DSc** **(DEROTH, LASZLO)** ***Médecine vétérinaire, Montréal*** Variations de la CK-MM du muscle strié en relation avec l'hyperthermie maligne **1990-91 EP avr 90–mar 91**	$ 39,810/89-90 42,153/90-91
2799	**DORE, MONIQUE, DMV, PhD** **(SMITH, C. WAYNE)** ***Pediatrics, Baylor*** The role of neutrophil adhesion in reperfusion injury: molecular mechanisms **1990-91 EP Jul 90–Jun 91**	$ 39,480/89-90 44,326/90-91

List No.	Grant/Award	Financial History
2800	**DROUIN, REGEN, MD, PhD** **(HOLMQUIST, GERALD P.)** ***Beckman Research Institute (Duarte, California)*** Replication time control of gene expression in mammalian cells **1990-91 EP May 90–Apr 91**	$ 21,045/89-90 41,699/90-91
2801	**DUAN, JIANMIN, PhD** **(MOFFAT, MARGARET P.)** ***Pharmacology and Toxicology, Western Ontario*** Mechanisms underlying the electrophysiological and biochemical effects of reperfusion **1990-91 EP Apr 90–Mar 91**	$ 20,539/89-90 28,354/90-91
2802	**DUTZ, JAN P., MD** **(EISEN, HERMAN N.)** ***Biology, Massachusetts Institute of Technology*** Antigen processing mutants as defective targets for cytotoxic T lymphocytes **1990-91 EP Sep 90–May 91**	$ 32,309/90-91
2803	**DYER, JOHN R., PhD** **(DUNN, ROBERT J.)** ***Montreal General Hospital*** Molecular genetics of murine sodium channel genes **1990-91 EP Apr 90–Mar 91**	$ 9,557/89-90 27,662/90-91
2804	**ECHELARD, YANN, PhD** **(NEPVEU, ALAIN)** ***Ludwig Institute for Cancer Research, Royal Victoria Hospital (Montreal)*** Genetic or epigenetic events leading to the production of novel c-myc mRNAs found in BC3H1 and A31 cells stably infected with the v-erbB oncogene **1990-91 EP Apr 90–Mar 91**	$ 19,878/89-90 28,354/90-91
2805	**EDERY, ISAAC, PhD** **(ROSBASH, MICHAEL)** ***Biology, Brandeis*** Role of period gene in biological clocks **1990-91 EP Jul 90–Jun 91**	$ 26,930/89-90 30,017/90-91
2806	**ELLIES, LESLEY G., BDS** **(AUBIN, JANE E.)** ***Dentistry, Toronto*** Interleukin-1 effects on bone formation in vitro: mechanisms of action **1990-91 EP Apr 90–Jun 90**	$ 40,296/89-90 9,844/90-91
2807	**ELLIOTT, W. MARK, PhD** **(AUERSPERG, NELLY)** ***Anatomy, British Columbia*** The influence of divergent differentiation on carcinogenesis **1990-91 EP Apr 90–Mar 91**	$ 24,839/89-90 28,712/90-91
2808	**ELLIS, JAMES R., PhD** **(GROSVELD, FRANK G.)** ***National Inst. for Medical Research (London, Eng.)*** Transcription factors involved in erythroid differentiation **1990-91 EP Aug 90–Apr 91**	$ 22,444/90-91
2809	**ELLISON, KIMBERLY S., PhD** **(PATERSON, MALCOLM C.)** ***Cross Cancer Institute (Edmonton)*** DNA repair mechanisms in mammalian cells **1990-91 EP Apr 90–Mar 91**	$ 15,749/89-90 28,053/90-91
2810	**EPSTEIN, MICHELLE M., MD** **(BOTTOMLY, KIM)** ***Medicine, Yale*** Role of peptide: major histocompatibility complex class II and CD4 subsets in experimental allergic encephalomyelitis **1990-91 EP Jul 90–Jun 91**	$ 40,140/90-91
2811	**EVANS, PETER J., MD** **(MACKINNON, SUSAN E.)** **(HUDSON, ALAN R.)** ***Surgery, Toronto*** The peripheral nerve allograft **1990-91 EP Apr 90–Mar 91**	$ 30,270/89-90 34,173/90-91
2812	**FALCONER, MARCIA M., PhD** **(SOLOMON, FRANK)** ***Biology, Massachusetts Institute of Technology*** In vivo functions of ezrin, a cytoskeletal substrate for tyrosine kinases **1990-91 EP Nov 90–Apr 91**	$ 14,305/90-91
2813	**FAN, PING, BM** **(SZERB, JOHN C.)** ***Physiology and Biophysics, Dalhousie*** Metabolic factors in synaptic transmission **1990-91 EP Apr 90–Mar 91**	$ 23,572/89-90 41,645/90-91
2814	**FARRELL, CATHERINE L., PhD** **(RISAU, WERNER)** ***Max-Planck-Institut fur Psychiatrie (Munich)*** Blood-brain barrier development in vitro **1990-91 EP Jul 90–Jun 91**	$ 26,930/89-90 31,215/90-91
2815	**FEIGENBAUM, ANNETTE S.J., MBChB** **(ROBINSON, BRIAN H.)** ***Hospital for Sick Children (Toronto)*** The elucidation of the gene structure for lipoamide dehydrogenase and the definition of human deficiency at the molecular level **1990-91 EP Apr 90–Mar 91**	$ 30,831/89-90 42,153/90-91
2816	**FENG, GEN-SHENG, PhD** **(WILLIAMS, BRYAN R.G.)** ***Hospital for Sick Children (Toronto)*** Regulation of gene expression by interferons **1990-91 EP Aug 90–Mar 91**	$ 18,755/90-91
2817	**FERNANDEZ-RACHUBINSKI, FRANCOISE, PharmD** **(BLAJCHMAN, MORRIS A.)** ***Pathology, McMaster*** Molecular pathology of antithrombin III deficiency **1990-91 EP Apr 90–Mar 91**	$ 38,529/89-90 41,540/90-91
2818	**FIELD, CATHERINE J., PhD** **(MARLISS, ERROL B.)** ***Medicine, McGill*** Energy metabolism in immunocytes from the spontaneously diabetic BB rat **1990-91 EP Apr 90–Mar 91**	$ 27,259/89-90 30,281/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2819	**FILEP, JANOS G., MD** **(SIROIS, PIERRE)** ***Pharmacologie, Sherbrooke*** Effets pharmacologiques de l'endothéline sur les voies respiratoires **1990-91 EP avr 90–mar 91**	$ 21,409/89-90 42,153/90-91
2820	**FILTEAU, SUZANNE M., PhD** **(TOMKINS, ANDREW)** ***London School of Hygiene and Tropical Medicine*** Interactions between malnutrition and infectious disease in vitamin A-supplemented children in Ghana **1990-91 EP Apr 90–Mar 91**	$ 19,868/89-90 30,627/90-91
2821	**FINLAYSON, PAUL G., PhD** **(CYNADER, MAX S.)** ***Ophthalmology, British Columbia*** Long-term potentiation in temporal (primary auditory) cortex slices **1990-91 EP Jul 90–Mar 91**	$ 29,510/89-90 24,321/90-91
2822	**FISHELL, GORDON J., PhD** **(HATTEN, MARY E.)** ***Pathology, Columbia*** Molecular mechanisms of granule cell migration **1990-91 EP Jun 90–May 91**	$ 20,071/89-90 28,559/90-91
2823	**FLETCHER, ELIZABETH J., PhD** **(MACDONALD, JOHN F.)** ***Physiology, Toronto*** Intracellular regulation of N-methyl-D-aspartate receptors **1990-91 EP Sep 90–Mar 91**	$ 17,111/90-91
2824	**FOLDES, EVA, MD** **(SIROIS, PIERRE)** ***Pharmacologie, Sherbrooke*** Immunopharmacology of leukotrienes **1990-91 EP mai 90–mar 91**	$ 38,782/90-91
2825	**FORTIER, PIERRE A., PhD** **(FETZ, EBERHARD E.)** ***Physiology and Biophysics, Washington (Seattle)*** Contribution of corticomotoneuronal cells to the discharge of single motor units and wrist torque **1990-91 EP Jun 90–May 91**	$ 27,706/89-90 30,803/90-91
2826	**FOURNIER, SUSAN, PhD** **(MCBURNEY, MICHAEL W.)** ***Medicine, Ottawa*** Studies on the pgk-1 gene and the mediation of X-chromosome inactivation **1990-91 EP Apr 90–Mar 91**	$ 25,831/89-90 28,784/90-91
2827	**FRANCIS, GORDON A., MD** **(BIERMAN, EDWIN L.)** ***Medicine, Washington (Seattle)*** Effects of glycosylation on high density lipoprotein structure and function in vitro **1990-91 EP Oct 90–Jun 91**	$ 31,696/90-91
2828	**FRAPPELL, PETER B., PhD** **(MORTOLA, JACOPO P.)** ***Physiology, McGill*** Metabolic adaptation of the newborn: role of oxygen supply **1990-91 EP Oct 90–Mar 91**	$ 15,880/90-91
2829	**FRAPPIER, LORI D., PhD** **(O'DONNELL, MICHAEL E.)** ***Microbiology, Cornell University Medical College (New York)*** Characterization of the Epstein-Barr virus origin binding protein, EBNA1 **1990-91 EP Jul 90–Jun 91**	$ 27,790/89-90 30,920/90-91
2830	**FRASER, PAUL E., PhD** **(KIRSCHNER, DANIEL A.)** ***Neurology, Harvard*** Biophysical aspects of nervous system disease: multiple sclerosis and Alzheimer's **1990-91 EP Jul 90–Jun 91**	$ 27,790/89-90 30,920/90-91
2831	**FREEDMAN, MARK S., MD** **(ANTEL, JACK P.)** ***Neurology and Neurosurgery, McGill*** Cellular basis of immune dysregulation in multiple sclerosis **1990-91 EP Apr 90–Jun 90**	$ 38,826/89-90 9,545/90-91
2832	**FRUTEAU DE LACLOS, BERNARD, MD, PhD** **(MURPHY, ROBERT C.)** ***Pharmacology, Colorado (Denver)*** Sulfidopeptide leukotriene production in the human **1990-91 EP Dec 90–May 91**	$ 22,681/90-91
2833	**FUNK, WALTER D., PhD** **(WRIGHT, WOODRING E.)** ***Cell Biology and Neuroscience, Texas (Dallas)*** Structure and complex formation of myogenin **1990-91 EP Mar 91–May 91**	$ 6,503/90-91
2834	**GALLAND, CONRAD C.R., MD** **(HINTON, GEOFFREY E.)** ***Physics, Toronto*** The contrastive Hebb synapse as a mechanism for self-organization **1990-91 EP May 90–Mar 91**	$ 38,871/90-91
2835	**GALLINGER, STEVEN, MD** **(RODER, JOHN C.)** ***Mount Sinai Hospital (Toronto)*** Characterization of the human natural killer cell receptor; anticancer immunotherapy of the SCID/Hu mouse **1990-91 EP Apr 90–Jun 90**	$ 40,296/89-90 9,844/90-91
2836	**GAN, KEZHENG, PhD** **(SLUTSKY, ARTHUR S.)** ***Medicine, Toronto*** Flow dynamics and gas transport **1990-91 EP Sep 90–Mar 91**	$ 20,905/90-91

List No.	Grant/Award	Financial History
2837	**GARSON, KENNETH, PhD** **(FRIED, MICHAEL)** ***Imperial Cancer Research Fund Lab. (London, Eng.)*** Cloning and analysis of additional genes in the closely spaced mouse surfeit gene cluster **1990-91 EP Jun 90–May 91**	$ 21,382/89-90 28,559/90-91
2838	**GIROUX, SYLVIE, PhD** **(RUIZ-CARRILLO, ADOLFO)** ***Hôtel-Dieu de Québec*** Etude de l'activité d'une endonucléase à spécificité de sites récemment identifiée chez différentes espèces **1990-91 EP avr 90–mar 91**	$ 9,557/89-90 27,602/90-91
2839	**GODDARD, PHILIP J., PhD** **(SILEN, WILLIAM)** ***Surgery, Harvard*** Control mechanisms regulating intracellular pH in cell types of the gastric mucosa **1990-91 EP Jul 90–Jun 91**	$ 19,878/89-90 28,663/90-91
2840	**GODSON, DALE L., DVM** **(BABIUK, LORNE A.)** ***Veterinary Microbiology, Saskatchewan*** Characterization and role of the anti-bovine coronavirus cytotoxic cell **1990-91 EP Apr 90–Jun 90**	$ 34,993/89-90 8,650/90-91
2841	**GOLDBERG, HOWARD J., MD** **(DE CROMBRUGGHE, BENOIT)** ***Molecular Genetics, Texas (Houston)*** Molecular mechanisms controlling the expression of type I collagen genes **1990-91 EP May 90–Apr 91**	$ 30,832/89-90 42,399/90-91
2842	**GRAHAM, ROGER W., PhD** **(KILBURN, DOUGLAS G.)** **(WARREN, R. ANTONY J.)** ***Microbiology, British Columbia*** Protein engineering, gene expression, and downstream processing, using cellulose-binding fusion protein technology **1990-91 EP Jan 91–Mar 91**	$ 6,503/90-91
2843	**GRANT, CHRISTOPHER C.R., PhD** **(TOMPKINS, LUCY S.)** ***Microbiology and Immunology, Stanford*** Genetic basis of virulence in Campylobacter **1990-91 EP Jun 90–May 91**	$ 27,706/89-90 30,803/90-91
2844	**GRAVEL, CLAUDE, PhD** **(JOLICOEUR, PAUL)** ***Institut de recherches cliniques de Montréal*** Construction de souris transgéniques développant une encéphalopathie spongiforme **1990-91 EP avr 90–mar 91**	$ 23,847/89-90 28,641/90-91
2845	**GRIEBEL, PHILIP J., DVM, PhD** **(REYNOLDS, JOHN D.)** ***Medical Physiology, Calgary*** In vivo investigation of ileal Peyer's patch B cell differentiation **1990-91 EP Apr 90–Mar 91**	$ 38,678/89-90 41,697/90-91
2846	**GRIFFITH, C. MAY, PhD** **(HAY, ELIZABETH D.)** ***Anatomy and Cellular Biology, Harvard*** Studies of embryonic epithelial mesenchymal transformations using immunofluorescence, in situ hybridization, and light and electron microscopy **1990-91 EP May 90–Apr 91**	$ 27,104/90-91
2847	**GRIGORIADIS, AGAMEMNON E., PhD** **(WAGNER, ERWIN F.)** ***Molecular Pathology, Vienna*** Gene transfer into embryonic stem cells **1990-91 EP Jun 90–May 91**	$ 26,785/89-90 30,304/90-91
2848	**GRIMM, PAUL C., MD** **(ETTENGER, ROBERT B.)** ***Pediatrics, California (Los Angeles)*** The immunologic nature of the presensitized state in organ transplantation **1990-91 EP Jul 90–Jun 91**	$ 40,675/89-90 42,644/90-91
2849	**GUO, YUDING, MD, PhD** **(JONES, GLENVILLE)** ***Biochemistry, Queen's*** Vitamin D metabolism and steroid receptors **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
2850	**GUPTA, SANJOY K., PhD** **(DUNN, ROBERT J.)** ***Montreal General Hospital*** Sodium channel expression in animal cells **1990-91 EP Jun 90–Mar 91**	$ 22,872/90-91
2851	**GURBINDO, COVADONGA, MD, PhD** **(SEIDMAN, ERNEST G.)** ***Pédiatrie, Montréal*** Studies on the mechanisms involved in the pathogenesis of immune-mediated intestinal diseases **1990-91 EP avr 90–mar 91**	$ 40,296/89-90 42,153/90-91
2852	**HACHE, ROBERT J.G., PhD** **(BEATO, MIGUEL)** ***Molekularbiologie und Tumorforschung, Marburg*** Chromatin structure and regulation of transcription of mouse mammary tumor virus **1990-91 EP Jun 90–Aug 90**	$ 28,996/89-90 10,782/90-91
2853	**HALPERN, MARNIE E., PhD** **(KIMMEL, CHARLES B.)** ***Biology, Oregon (Eugene)*** Mutational analysis of neuronal development in zebrafish **1990-91 EP May 90–Apr 91**	$ 27,980/90-91
2854	**HAN, XINQIANG, BM** **(FERRIER, GREGORY R.)** ***Pharmacology, Dalhousie*** Role of alpha- and beta-adrenergic agents in cardiac arrhythmias **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2855	**HASSESSIAN, HAROUT M., PhD** **(BURNSTOCK, GEOFFREY)** ***Anatomy and Developmental Biology, University College (London, England)*** Vasoconstriction of pulmonary vessels produced by adenosine triphosphate **1990-91 EP Sep 90–May 91**	$ 21,831/90-91	2864	**HOLWERDA, BARRY C., PhD** **(ROGERS, JOHN C.)** ***Internal Medicine, Washington (St. Louis)*** Intercellular processing and targeting of the thiol protease aleurain **1990-91 EP May 90–Jul 90**	$ 28,910/89-90 7,170/90-91
2856	**HAYWARD, CATHERINE P.M., MD** **(KELTON, JOHN G.)** ***Pathology, McMaster*** Investigation of a novel platelet activation antigen **1990-91 EP Jul 90–Mar 91**	$ 31,368/90-91	2865	**HONER, WILLIAM G., MD** **(KAUFMANN, CHARLES A.)** ***Psychiatry, Columbia*** The role of candidate genes and anonymous gene markers in the major psychoses and related disorders **1990-91 EP Jun 90–Dec 90**	$ 37,688/89-90 24,122/90-91
2857	**HEGELE, RICHARD G., MD** **(HOGG, JAMES C.)** ***Pathology, British Columbia*** The role of respiratory syncytial viruses in the pathogenesis of asthma **1990-91 EP Apr 90–Mar 91**	$ 27,406/89-90 40,511/90-91	2866	**HOPKINS, SUSAN R., MD** **(MCKENZIE, DONALD C.)** ***Physical Education and Recreation, British Columbia*** Exercise-induced hypoxemia: diffusion limitation or ventilatory drives? **1990-91 EP Apr 90–Mar 91**	$ 29,043/89-90 40,615/90-91
2858	**HEI, YONG-JIANG, BM** **(DIAMOND, JACK)** **(MCNEILL, JOHN H.)** ***Pharmaceutical Sciences, British Columbia*** Alteration of beta-adrenergic receptor system in diabetic heart **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91	2867	**HOWELL, ANN MARIE, PhD** **(PRIESS, JAMES R.)** ***Fred Hutchinson Cancer Research Center (Seattle)*** Analysis of glp-1 suppressors **1990-91 EP Jun 90–May 91**	$ 26,030/89-90 29,059/90-91
2859	**HENKEMEYER, MARK J., PhD** **(PAWSON, ANTHONY J.)** ***Medical Genetics, Toronto*** Functions of protooncogenes in mammalian development **1990-91 EP Nov 90–Mar 91**	$ 12,576/90-91	2868	**HU, BIN, MD, PhD** **(BOURQUE, CHARLES W.)** ***Montreal General Hospital*** Neuropharmacology of glutamate receptors on rat supraoptic neurosecretory neurons **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
2860	**HILL, DAVID P., PhD** **(ROSSANT, JANET)** ***Medical Genetics, Toronto*** Isolation of developmentally regulated genes in the mouse **1990-91 EP Apr 90–Mar 91**	$ 17,856/89-90 29,912/90-91	2869	**HU, XIUYUAN, MB** **(WORTON, RONALD G.)** ***Medical Genetics, Toronto*** The molecular mechanism of duplication formation in Duchenne muscular dystrophy **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
2861	**HNATOWICH, MARK R., PhD** **(LEFKOWITZ, ROBERT J.)** **(CARON, MARC G.)** ***Medicine, Duke*** Structure and function of the human beta2-adrenergic receptor **1990-91 EP Jul 90–Mar 91**	$ 29,510/89-90 22,215/90-91	2870	**HUDSON, THOMAS J., MD** **(HOUSMAN, DAVID E.)** ***Biology, Massachusetts Institute of Technology*** Heat shock proteins in the process of host resistance **1990-91 EP Jul 90–Jun 91**	$ 40,140/90-91
2862	**HOEHN, KATJA, MD, PhD** **(MACVICAR, BRIAN A.)** ***Medical Physiology, Calgary*** Voltage clamped ionic currents and imaging of intracellular calcium in acutely isolated astrocytes **1990-91 EP Apr 90–Mar 91**	$ 32,629/89-90 38,021/90-91	2871	**HUGO, PATRICE, PhD** **(SCOLLAY, ROLAND)** **(BOYD, RICHARD)** ***Pathology and Immunology, Monash*** Caracterisation de sous-populations immatures de thymocytes **1990-91 EP mai 90–avr 91**	$ 26,342/89-90 31,455/90-91
2863	**HOFFMAN, DIANE C., PhD** **(WISE, ROY A.)** ***Psychology, Concordia*** The anatomical and neurochemical organization of functional brain systems controlling the rewarding and locomotor-activating properties of drugs of abuse **1990-91 EP Apr 90–Aug 90**	$ 26,835/89-90 11,258/90-91	2872	**HULETSKY, ANN, PhD** **(LEVESQUE, ROGER C.)** ***Microbiologie, Laval*** Site-specific mutagenesis and protein engineering of SHV-type beta-lactamases **1990-91 EP avr 90–mar 91**	$ 26,691/89-90 29,686/90-91

List No.	Grant/Award	Financial History
2873	**HURLBERT, R. JOHN, MD** **(TATOR, CHARLES H.)** ***Surgery, Toronto*** Recovery and regeneration after acute experimental spinal cord injury **1990-91 EP Apr 90–Mar 91**	$ 27,250/89-90 39,080/90-91
2874	**IJAZ, MOHAMMAD K., DVM, PhD** **(BABIUK, LORNE A.)** ***Veterinary Microbiology, Saskatchewan*** Biology, immunology and pathogenesis of bovine enteric viral infections **1990-91 EP Apr 90**	$ 40,296/89-90 3,281/90-91
2875	**IRWIN, DAVID M., PhD** **(WILSON, ALLAN C.)** ***Biochemistry, California (Berkeley)*** Evolution of the ruminant lysozyme genes **1990-91 EP Jun 90–Aug 90**	$ 28,996/89-90 7,288/90-91
2876	**JACKSON, MARION L., DVM** **(HAINES, DEBORAH M.)** **(MISRA, VIKRAM)** ***Veterinary Microbiology, Saskatchewan*** Molecular basis of the heterogeneity of feline leukemia virus-associated diseases **1990-91 EP Apr 90–Mar 91**	$ 4,581/89-90 42,153/90-91
2877	**JARVI, KEITH A., MD** **(GAGNON, CLAUDE)** ***Surgery, McGill*** Purification and role of a protease involved in sperm motility **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
2878	**JARVIE, KEITH R., PhD** **(CARON, MARC G.)** ***Cell Biology, Duke*** D2-dopamine receptors: structure-function relationships **1990-91 EP May 90–Apr 91**	$ 27,376/90-91
2879	**JASSAR, BALVINDER S., BVSc** **(SMITH, PETER A.)** ***Pharmacology, Alberta*** Regulation of ion channels in sympathetic neurons **1990-91 EP Jul 90–Mar 91**	$ 31,368/90-91
2880	**JEVNIKAR, ANTHONY M., MD** **(KELLEY, VICKI E.)** ***Medicine, Harvard*** The role of kidney tubular cells in autoimmune nephritis **1990-91 EP Jul 90–Jun 91**	$ 40,737/89-90 42,726/90-91
2881	**JIA, YANLIN, MD** **(HEISLER, SEYMOUR)** **(MACKLEM, PETER T.)** ***Medicine, McGill*** Characterization of the dysfunctional sodium channel in cystic fibrosis **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
2882	**JIANG, HE, MD** **(STEPHENS, NEWMAN L.)** ***Physiology, Manitoba*** Biochemical and biophysical study of bronchial smooth muscle relaxation **1990-91 EP Apr 90–Mar 91**	$ 42,153/90-91

N° de liste	Subvention/Bourse	Résumé financier
2883	**JIANG, MINGTAO, BM** **(NARAYANAN, NJANOOR)** ***Physiology, Western Ontario*** Calcium pump function of sarcoplasmic reticulum in aged myocardium **1990-91 EP Jul 90–Mar 91**	$ 30,430/90-91
2884	**JOHNSTON, SHEILA A., PhD** **(MALER, LEONARD)** ***Anatomy, Ottawa*** Immunohistochemical enkephalin and autoradiographic 5-HT 1A receptor distribution in the brain of Apteronotus leptorhynchus and the related behavioral effects of 5-HT 1A and enkephalin ligands **1990-91 EP Apr 90–May 90**	$ 28,894/89-90 5,877/90-91
2885	**JOJART, ISTVAN, MD** **(CARAYANNIOTIS, GEORGE)** **(FARID, NADIR R.)** ***Medicine, Memorial University of Newfoundland*** T cell receptors in autoimmunity **1990-91 EP Jul 90–Mar 91**	$ 33,309/90-91
2886	**JONES, AMANDA M., MBBS** **(ZILTENER, HERMANN J.)** ***Pathology, British Columbia*** Anti-cytokine antibodies as agonists and antagonists **1990-91 EP May 90–Mar 91**	$ 32,873/90-91
2887	**KAISER, STEPHANIE M., MD** **(GOLTZMAN, DAVID)** ***Physiology, McGill*** Examination of parathyroid hormone interactions with its receptors **1990-91 EP Jul 90–Mar 91**	$ 23,873/89-90 30,951/90-91
2888	**KAISER, URSULA B., MD** **(CHIN, WILLIAM W.)** ***Internal Medicine, Harvard*** Hormonal regulation of pituitary gonadotropin gene expression **1990-91 EP Aug 90–Apr 91**	$ 28,823/90-91
2889	**KAMEL-REID, SUZANNE K., PhD** **(RAY, PETER N.)** ***Hospital for Sick Children (Toronto)*** Molecular genetics as applied to the study of human leukemia **1990-91 EP Apr 90–Jul 90**	$ 28,610/89-90 10,755/90-91
2890	**KAO, KENNETH R., PhD** **(GURDON, JOHN B.)** ***Zoology, Cambridge*** Molecular analysis of dorsal differentiation in early embryonic development **1990-91 EP Jun 90–May 91**	$ 27,706/89-90 30,803/90-91
2891	**KARCZ, STEVEN R., PhD** **(MITCHELL, GRAHAM F.)** ***Royal Melbourne Hospital*** Identification, characterization and expression of schistosomiasis vaccine molecules **1990-91 EP May 90–Apr 91**	$ 30,736/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2892	**KASTELIC, JOHN P., DVM** **(GINTHER, OLIVER J.)** ***Veterinary Science, Wisconsin*** Corpus luteum function during pregnancy in cattle **1990-91 EP Jun 90–Aug 90**	$ 37,582/89-90 9,556/90-91
2893	**KATSANIS, EMMANUEL, MD** **(ANDERSON, PETER M.)** ***Pediatrics, Minnesota*** Identification of mechanisms of immunosuppression (lymphoid suicide) **1990-91 EP Jul 90–Jun 91**	$ 40,675/89-90 42,644/90-91
2894	**KAWAJA, MICHAEL D., PhD** **(GAGE, FRED H.)** ***Neurosciences, California (San Diego)*** Neuroplasticity of the septo-hippocampal circuit **1990-91 EP Jul 90–Jun 91**	$ 29,113/90-91
2895	**KAY, ROBERT J., PhD** **(HUMPHRIES, R. KEITH)** ***Medicine, British Columbia*** Cloning and characterization of proteins involved in hemopoiesis **1990-91 EP Apr 90–Mar 91**	$ 29,239/89-90 31,468/90-91
2896	**KELLY, GREGORY M., PhD** **(MOON, RANDALL T.)** ***Pharmacology, Washington (Seattle)*** Mechanisms of localization of vimentin mRNA **1990-91 EP Jul 90–Mar 91**	$ 32,901/89-90 22,160/90-91
2897	**KELLY, MELANIE E.M., PhD** **(SIMS, STEPHEN M.)** ***Physiology, Western Ontario*** Hormonal control of ionic channels in osteoclasts **1990-91 EP Apr 90–Mar 91**	$ 23,588/89-90 30,568/90-91
2898	**KELTON, DAVID F., DVM** **(MARTIN, S. WAYNE)** ***Population Medicine, Guelph*** Development and implementation of a dairy herd health monitoring program **1990-91 EP May 90–Mar 91**	$ 37,731/90-91
2899	**KHOURY, MARIANNE, MD** **(KRENSKY, ALAN M.)** ***Pediatrics, Stanford*** Cellular and molecular studies of HLA recognition **1990-91 EP Jul 90–Jun 91**	$ 40,140/90-91
2900	**KIM, PETER C.W., MD** **(COHEN, ZANE)** ***Surgery, Toronto*** Small intestinal transplantation **1990-91 EP Apr 90–Mar 91**	$ 34,993/89-90 39,080/90-91
2901	**KISHIHARA, KENJI, PhD** **(MAK, TAK W.)** ***Ontario Cancer Institute (Toronto)*** To generate mice deficient in functional genes of the tyrosine phosphatase CD45 **1990-91 EP Apr 90–Mar 91**	$ 16,853/89-90 29,686/90-91

N° de liste	Subvention/Bourse	Résumé financier
2902	**KREIDSTEIN, MICHAEL L., MD** **(PANG, CHO Y.)** ***Surgery, Toronto*** Regulation of cutaneous circulation in skin flaps **1990-91 EP Apr 90–Jun 90**	$ 30,270/89-90 7,458/90-91
2903	**KRONE, PATRICK H., PhD** **(REEDER, RONALD H.)** ***Fred Hutchinson Cancer Research Center (Seattle)*** Cloning the gene for rDNA transcription factor SL1 **1990-91 EP Sep 90–May 91**	$ 22,871/90-91
2904	**KRUSHEL, LESLIE A., PhD** **(EDELMAN, GERALD M.)** ***Developmental and Molecular Biology, Rockefeller*** Cell adhesion molecules in forebrain development **1990-91 EP Sep 90–May 91**	$ 20,808/90-91
2905	**KUBES, PAUL, PhD** **(GRANGER, D. NEIL)** ***Physiology and Biophysics, Louisiana State*** Effect of platelet-activating factor, lymphocytes and intestinal transplantation on leukocyte function **1990-91 EP May 90–Apr 91**	$ 26,772/89-90 29,797/90-91
2906	**KUCEY, DARYL S., MD** **(ROTSTEIN, ORI D.)** ***Surgery, Toronto*** The role of fibrin deposition in the pathogenesis of abdominal infection **1990-91 EP Apr 90–Mar 91**	$ 25,458/89-90 36,600/90-91
2907	**KUCHEL, GEORGE A., MD** **(BLUM, MARIANN)** **(MORRISON, JOHN H.)** ***Neurobiology, Mount Sinai School of Medicine (New York)*** Molecular regulation of nerve growth factor and its receptor in the mature and aging nervous system **1990-91 EP Jul 90–Jun 91**	$ 42,644/90-91
2908	**KUREISHI, AMAR, MD** **(BRYAN, LAWRENCE E.)** ***Microbiology and Infectious Diseases, Calgary*** Molecular studies of DNA gyrase from ciprofloxacin-resistant P. aeruginosa **1990-91 EP Apr 90–Mar 91**	$ 29,441/89-90 40,615/90-91
2909	**LABELLA, LISA A., PhD** **(ROSSIGNOL, SERGE)** ***Physiologie, Montréal*** Presynaptic mechanisms during treadmill locomotion **1990-91 EP avr 90–mar 91**	$ 14,074/89-90 27,903/90-91
2910	**LABRECQUE, LOUISE-G., MD** **(GRIFFIN, BEVERLY E.)** ***Hammersmith Hospital (London, England)*** The application of polymerase chain reaction to detection of viral gene expression in epithelial cells **1990-91 EP Apr 90–Jun 91**	$ 53,871/90-91

List No.	Grant/Award	Financial History
2911	**LABRIE, CLAUDE, MD, PhD** **(MATHEWS, MICHAEL B.)** ***Cold Spring Harbor Laboratory*** Effects of the tat transactivator on HIV-1 RNA metabolism **1990-91 EP Jul 90–Jun 91**	$ 40,140/90-91
2912	**LACROIX, LINDA M.A., MD** **(BRIDGES, KENNETH R.)** ***Medicine, Harvard*** Expression, assembly, and lysosomal turnover of ferritin **1990-91 EP Jun 90–May 91**	$ 29,935/89-90 42,172/90-91
2913	**LAFLEUR, MICHEL, PhD** **(CULLIS, PIETER R.)** ***Biochemistry, British Columbia*** Membrane curvature and hydrocarbon order **1990-91 EP Apr 90–Jun 90**	$ 28,324/89-90 7,633/90-91
2914	**LAFOND, JULIE, PhD** **(BELIVEAU, RICHARD)** ***Chimie, Québec à Montréal*** Le transport de substrats modèles pour les anions au niveau de la barrière sang-cerveau **1990-91 EP avr 90–mar 91**	$ 22,458/89-90 30,568/90-91
2915	**LAMARRE, JONATHAN, DVM** **(HAYES, MICHAEL A.)** ***Veterinary Pathology, Guelph*** Growth factor regulation of liver repair **1990-91 EP Apr 90–Mar 91**	$ 28,290/89-90 32,049/90-91
2916	**LAPORTE, REGENT, DMV** **(BEVAN, JOHN A.)** ***Pharmacology, Vermont*** Research into the basis of tone in vascular smooth muscle, particularly that of small blood vessels **1990-91 EP Apr 90–May 91**	$ 20,089/89-90 42,069/90-91
2917	**LAURIER, LISANNE G., MD, PhD** **(GEORGE, SUSAN R.)** ***Medicine, Toronto*** The hormonal regulation of dopamine D2 receptor expression **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
2918	**LAUZON, ROBERT J.P., PhD** **(WEISSMAN, IRVING L.)** ***Pathology, Stanford*** Molecular and functional characterization of allorecognition structures of Botryllus schlosseri; microtubule-mediated localization of developmental potential in ascidian embryos **1990-91 EP Jul 90–Sep 90**	$ 29,124/89-90 7,464/90-91
2919	**LAYDEN, RONALD E., PhD** **(MATUS, ANDREW I.)** ***Friedrich Miescher-Institut (Basel)*** Gene expression during neural development **1990-91 EP May 90–Apr 91**	$ 31,679/89-90 30,685/90-91
2920	**LECLERC, NICOLE, PhD** **(HERRUP, KARL F.)** ***E.K. Shriver Center (Waltham, Massachusetts)*** The relationship between the antigenic cerebellar banding pattern and the cell lineages of the Purkinje cells **1990-91 EP Jun 90–May 91**	$ 13,835/89-90 28,109/90-91
2921	**LEDOUX, STEPHANE, MD** **(CASHMAN, NEIL R.)** ***Neurology and Neurosurgery, McGill*** Beta-amyloid precursor protein mRNA expression in Alzheimer's disease **1990-91 EP Apr 90–May 91**	$ 21,483/89-90 45,135/90-91
2922	**LESIUK, HOWARD J., MD** **(SUTHERLAND, GARNETTE R.)** **(SAUNDERS, JOHN K.)** **(PEELING, W. JAMES)** ***Pharmacology and Therapeutics, Manitoba*** Cerebral ischemia studies using nuclear magnetic resonance **1990-91 EP Apr 90–Aug 90**	$ 24,269/89-90 16,735/90-91
2923	**LEUNG, WAI-PING, PhD** **(MAK, TAK W.)** ***Medical Biophysics, Toronto*** Targeting of immune function genes by homologous recombination in embryonic stem cells **1990-91 EP Apr 90–Mar 91**	$ 28,825/89-90 30,568/90-91
2924	**LEWIS, JAMES F., MD** **(JOBE, ALAN H.)** ***Pediatrics, California (Los Angeles)*** Surfactant metabolism in lung injury **1990-91 EP Jun 90–May 91**	$ 40,315/89-90 42,563/90-91
2925	**LINDSAY, THOMAS F., MD** **(HECHTMAN, HERBERT B.)** ***Surgery, Harvard*** Inflammatory consequences of ischemia **1990-91 EP Jul 90–Jun 91**	$ 42,644/90-91
2926	**LINDSELL, CLAIRE E., BVSc** **(MURPHY, BRUCE D.)** ***Obstetrics and Gynecology, Saskatchewan*** Immunomodulation of fertility **1990-91 EP Apr 90–Mar 91**	$ 39,113/89-90 42,153/90-91
2927	**LIST, STEPHEN J., PhD, MD** **(CLEGHORN, JOHN M.)** ***Psychiatry, McMaster*** Brain dopamine receptors in good and poor responders to neuroleptics **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
2928	**LITCHFIELD, DAVID W., PhD** **(KREBS, EDWIN G.)** ***Pharmacology, Washington (Seattle)*** Mechanism of activation of casein kinase II **1990-91 EP Jul 90–Sep 90**	$ 29,081/89-90 7,405/90-91
2929	**LIU, XINGQUAN, PhD** **(PAWSON, ANTHONY J.)** ***Medical Genetics, Toronto*** Identity and function of GAP-associated phosphotyrosine-containing proteins **1990-91 EP Apr 90–Mar 91**	$ 25,968/90-91

N° de liste	Subvention/Bourse	Résumé financier

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
2930	**LIU, YAFANG, MB** **(ALBERT, PAUL R.)** ***Pharmacology and Therapeutics, McGill*** The specificity of G-protein coupling to different inhibitory receptors, and to various effector systems in a cellular model **1990-91 EP Apr 90–Mar 91**	$ 26,063/89-90 42,645/90-91	2940	**MACDONALD, P. HUGH, MD** **(BECK, IVAN T.)** ***Medicine, Queen's*** Studies on the pathophysiology of non-occlusive ischemic colitis **1990-91 EP Apr 90–Mar 91**	$ 29,043/89-90 40,615/90-91
2931	**LOHNES, DAVID L., PhD** **(CHAMBON, PIERRE)** ***Chimie biologique, Université Louis Pasteur (Strasbourg)*** Structure/function of retinoic acid receptors **1989-90 EP jlt 90–jui 91**	$ 21,434/89-90 30,014/89-90	2941	**MACKAY, ROBERT A., DMD** **(TONZETICH, JOSEPH)** **(MCBRIDE, BARRY C.)** ***Dentistry, British Columbia*** Immunofluorescent and immunocytochemical study of Bacteroides gingivalis vesicles on oral mucosa **1990-91 EP Apr 90–Mar 91**	$ 34,993/89-90 39,080/90-91
2932	**LORIMER, IAN A.J., PhD** **(SMITH, MICHAEL)** ***Biochemistry, British Columbia*** In vitro mutagenesis analysis of Mat alpha-2 DNA-binding specificity **1990-91 EP May 90–Mar 91**	$ 26,576/90-91	2942	**MACKENZIE, ALEXANDER E., MD, PhD** **(KORNELUK, ROBERT G.)** ***Pediatrics, Ottawa*** The molecular genetics of myotonic muscular dystrophy **1990-91 EP Apr 90–Jun 90**	$ 29,935/89-90 9,545/90-91
2933	**LOW, AMY M., PhD** **(DANIEL, EDWIN E.)** ***Biomedical Sciences, McMaster*** Regulation of intracellular calcium in vascular smooth muscles **1990-91 EP Oct 90–Mar 91**	$ 15,208/90-91	2943	**MACKIE, JANE E., PhD** **(DEELEY, ROGER G.)** **(COLE, SUSAN P.C.)** ***Oncology, Queen's*** Role of GSH-S-transferase in drug resistance **1990-91 EP Dec 90–Mar 91**	$ 9,970/90-91
2934	**LOZEMAN, FREDERICK J., DPhil** **(KREBS, EDWIN G.)** ***Pharmacology, Washington (Seattle)*** Properties and cellular functions of casein kinase II **1990-91 EP Jun 90–Aug 90**	$ 28,996/89-90 7,288/90-91	2944	**MACNAUGHTON, WALLACE K., PhD** **(GALL, D. GRANT)** ***Pediatrics, Calgary*** Inflammatory mediators in gastrointestinal anaphylaxis **1990-91 EP Apr 90–Mar 91**	$ 24,639/89-90 28,641/90-91
2935	**LUMSDEN, JOHN S., DVM** **(FERGUSON, HUGH W.)** ***Veterinary Pathology, Guelph*** Local immune response in fish gills **1990-91 EP Sep 90–Mar 91**	$ 21,028/90-91	2945	**MALKIN, DAVID D., MD** **(FRIEND, STEPHEN H.)** ***Pediatrics, Harvard*** Characterization of recessive oncogenes in family cancer syndromes **1990-91 EP Jul 90–Jun 91**	$ 38,290/89-90 41,390/90-91
2936	**LUO, JIANGMING, MD** **(MURPHY, LIAM J.)** ***Physiology, Manitoba*** The molecular mechanisms involved in growth hormone action **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91	2946	**MALO, DANIELLE, DMV, PhD** **(SKAMENE, EMIL)** ***Montreal General Hospital*** Physical mapping and cloning of the Bcg gene **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
2937	**LUSSIER, BENOIT T., PhD** **(DUFY, BERNARD)** ***CNRS (Bordeaux)*** Regulation of Ca2+ currents and cytosolic Ca2+ by growth hormone-releasing hormone in rat somatotrophs **1990-91 EP jui 90–mai 91**	$ 28,563/90-91	2947	**MANA, JANET M., PhD** **(ABERCROMBIE, ELIZABETH D.)** **(ZIGMOND, MICHAEL J.)** ***Behavioural Neuroscience, Pittsburgh*** Mechanism of action of L-DOPA in an animal model of parkinsonism **1990-91 EP Jun 90–May 91**	$ 27,938/90-91
2938	**MA, YUANHONG, PhD** **(HAYDEN, MICHAEL R.)** ***Medical Genetics, British Columbia*** Molecular pathology of human lipoprotein lipase deficiency **1990-91 EP May 90–Mar 91**	$ 28,859/90-91	2948	**MANA, MICHAEL J., PhD** **(BERGER, THEODORE W.)** ***Behavioural Neuroscience, Pittsburgh*** Effects of stress on noradrenergic modulation of hippocampal function **1990-91 EP Oct 90–Jun 91**	$ 20,808/90-91
2939	**MACAULAY, COLIN G., PhD** **(FORBES, DOUGLASS J.)** ***Biology, California (San Diego)*** Reconstitution and study of normal and biochemically altered nuclear pores **1990-91 EP May 90–Apr 91**	$ 7,877/89-90 27,555/90-91			

List No.	Grant/Award	Financial History
2949	**MANGALAM, HARRY J., PhD** **(THOMAS, JOHN B.)** ***Salk Institute (La Jolla)*** Gene regulation during Drosophila neuronal development **1990-91 EP Aug 90–Apr 91**	$ 20,808/90-91
2950	**MANNING, PATRICK J., MBBCh** **(O'BYRNE, PAUL M.)** ***Medicine, McMaster*** Histamine-stimulated inhibitory prostaglandin release from airway smooth muscle **1990-91 EP Apr 90–Mar 91**	$ 30,831/89-90 42,153/90-91
2951	**MANOLSON, MORRIS F., PhD** **(JONES, ELIZABETH W.)** ***Biological Sciences, Carnegie Mellon*** Genetic analysis of the formation and function of the yeast vacuole **1990-91 EP May 90–Apr 91**	$ 27,201/89-90 30,248/90-91
2952	**MARETTE, ANDRE, PhD** **(VRANIC, MLADEN)** **(KLIP, AMIRA)** ***Physiology, Toronto*** Effects of diabetes on the rat skeletal muscle and liver glucose transport systems **1990-91 EP Sep 90–Mar 91**	$ 16,768/90-91
2953	**MARLEAU, SYLVIE, PhD** **(BORGEAT, PIERRE)** ***Physiologie, Laval*** Activation de la 5-lipoxygénase du neutrophile par la leucotriène B4 **1990-91 EP sep 90–mar 91**	$ 15,389/90-91
2954	**MARSDEN, PHILIP A., MD** **(BRENNER, BARRY M.)** ***Medicine, Harvard*** Mechanisms controlling the production and release of vasoactive mediators by glomerular cells **1990-91 EP Jul 90–Jun 91**	$ 40,675/89-90 42,644/90-91
2955	**MARTIN, DOUGLAS S., PhD** **(HAYWOOD, JOSEPH R.)** ***Pharmacology, Texas (San Antonio)*** Role of gamma-aminobutyric acid in hypertension **1990-91 EP Jun 90–May 91**	$ 27,280/89-90 30,359/90-91
2956	**MARTIN, JEAN-RENE, DMV** **(OLLO, ROGER)** ***Institut Pasteur (Paris)*** Mutagenèse et clonage de gènes altérant la morphologie de l'embryon **1990-91 EP jui 90–mai 91**	$ 37,583/89-90 40,924/90-91
2957	**MARTIN, MONTGOMERY A., MD** **(TATTON, WILLIAM G.)** ***Physiology, Toronto*** Magnetic resonance imaging of cytoarchitectural changes in dopaminergic cell populations **1990-91 EP Apr 90–Mar 91**	$ 38,826/89-90 41,854/90-91
2958	**MARTINEAU, DANIEL, DMV** **(BOWSER, PAUL R.)** ***Avian and Aquatic Animal Medicine, Cornell*** Retroviral etiology of walleye dermal sarcoma **1990-91 EP Jun 90–May 91**	$ 40,549/89-90 42,480/90-91
2959	**MARTINEAU, LUCIE, PhD** **(ROTHWELL, NANCY J.)** ***Physiological Sciences, Manchester*** Mechanisms of hypermetabolism **1990-91 EP Jul 90–Jun 91**	$ 6,829/89-90 29,729/90-91
2960	**MASON, MICHAEL J., PhD** **(GRINSTEIN, SERGIO)** ***Hospital for Sick Children (Toronto)*** Transmembrane Ca2+ pathways in T lymphocytes **1990-91 EP Apr 90–Mar 91**	$ 29,239/89-90 30,568/90-91
2961	**MATHESON, GORDON O., MD** **(MCKENZIE, DONALD C.)** ***Physical Education and Recreation, British Columbia*** Noninvasive (31P-NMR) and invasive measures of the skeletal muscle metabolism in vivo during exercise **1990-91 EP Apr 90–Oct 90**	$ 40,296/89-90 23,626/90-91
2962	**MATSUYAMA, TOSHIFUMI, MD, PhD** **(MAK, TAK W.)** ***Medical Biophysics, Toronto*** Transdominant repressor of HIV regulatory protein tat **1990-91 EP Apr 90–Mar 91**	$ 42,153/90-91
2963	**MAZER, BRUCE D., MD** **(GELFAND, ERWIN W.)** ***Pediatrics, Colorado (Denver)*** Activation of B lymphocytes by platelet activating factor **1990-91 EP Jul 90–Jun 91**	$ 38,290/89-90 41,390/90-91
2964	**MCCARGAR, LINDA J., PhD** **(TAUNTON, JACK E.)** ***Physical Education and Recreation, British Columbia*** Energy metabolism in the diabetic athlete **1990-91 EP Apr 90–Jun 90**	$ 19,878/89-90 6,193/90-91
2965	**MCCUTCHEON, L. JILL, DVM** **(HODGSON, DAVID R.)** ***Veterinary Clinical Medicine and Surgery, Washington State*** Skeletal muscle: ultrastructural and functional alterations in fatigue **1990-91 EP May 90–Jul 90**	$ 37,469/89-90 9,402/90-91
2966	**MCGAVIN, MARTIN J., PhD** **(HOOK, MAGNUS)** ***Biochemistry, Alabama*** Molecular mechanisms of microbial adhesion to fibronectin **1990-91 EP May 90–Apr 91**	$ 28,949/90-91
2967	**MCMILLAN, ANNE S., BDS** **(HANNAM, ALAN G.)** ***Dentistry, British Columbia*** Motor unit behaviour in the human jaw muscles **1990-91 EP Apr 90**	$ 40,296/89-90 3,281/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
2968	**MCRAE, SANDRA F., PhD** **(GELFAND, TOBY)** ***History of Medicine, Ottawa*** The origins of scientific medicine and medical research in Canada in the 19th and 20th centuries **1990-91 EP Apr 90**	$ 25,348/89-90 3,526/90-91
2969	**MEGYESI, JOSEPH F., MD** **(FOLKMAN, M. JUDAH)** ***Anatomy and Cellular Biology, Harvard*** Mechanism of onset of angiogenic activity during progression to neoplasia **1990-91 EP May 90–Apr 91**	$ 27,250/89-90 39,225/90-91
2970	**MEIJ, JOHANNA T.A., PhD** **(PANAGIA, VINCENZO)** ***Anatomy, Manitoba*** Characteristics of phospholipase D activity in heart **1990-91 EP Jul 90–Mar 91**	$ 22,393/90-91
2971	**MELOCHE, SYLVAIN, PhD** **(POUYSSEGUR, JACQUES)** ***Biochimie, Nice*** Voies de transduction de la réponse mitogénique: le cas de la thrombine **1990-91 EP avr 90–nov 90**	$ 26,333/89-90 20,335/90-91
2972	**MENARD, LUC, PhD** **(SNYDERMAN, RALPH)** ***Medicine, Duke*** The role of small G proteins in receptor-mediated cell activation **1990-91 EP Apr 90–Jun 91**	$ 27,121/89-90 38,381/90-91
2973	**MENDELSON, JULIE R., PhD** **(ANSTIS, STUART M.)** ***Psychology, York*** The use of frequency modulation in the localization of moving sounds **1990-91 EP Apr 90–Mar 91**	$ 28,963/89-90 29,400/90-91
2974	**MIDHA, RAJIV, MD** **(HUDSON, ALAN R.)** **(MACKINNON, SUSAN E.)** ***Surgery, Toronto*** The study of nerve regeneration across a nerve allograft **1990-91 EP Jul 90–Mar 91**	$ 26,665/90-91
2975	**MIKKELSEN, TOM, MD** **(CAVENEE, WEBSTER C.)** ***Ludwig Institute for Cancer Research, Royal Victoria Hospital (Montreal)*** Molecular genetics of brain tumor progression **1990-91 EP Apr 90–Mar 91**	$ 29,935/89-90 41,854/90-91
2976	**MILNE, JACQUELINE L., PhD** **(DEVREOTES, PETER N.)** ***Biological Chemistry, Johns Hopkins*** Role of signal transduction in Dictyostelium development **1990-91 EP Feb 91–Apr 91**	$ 8,147/90-91
2977	**MITCHELL, JANE A., PhD** **(NORTHUP, JOHN K.)** **(RASMUSSEN, HOWARD)** ***Pharmacology, Yale*** Identification of the G protein(s) responsible for the coupling of cell surface receptors to the breakdown of polyphosphoinositides (phospholipase C) **1990-91 EP Jun 90–May 91**	$ 13,685/89-90 28,109/90-91
2978	**MOLINA, THIERRY J., MD** **(MAK, TAK W.)** ***Medical Biophysics, Toronto*** Deletion of lck gene by homologous recombination **1990-91 EP Oct 90–Mar 91**	$ 21,345/90-91
2979	**MONTGOMERY, JANE A., PhD** **(BRUNENGRABER, HENRI)** ***Nutrition, Montréal*** Metabolism of isomers of 2,3-butanediol; acetone metabolism **1990-91 EP avr 90–mar 91**	$ 27,121/89-90 30,138/90-91
2980	**MORASH, SHERRY C., PhD** **(BELL, ROBERT M.)** ***Biochemistry, Duke*** Regulation of eukaryotic lipid metabolism **1990-91 EP Jul 90–Jun 91**	$ 29,113/90-91
2981	**MORASSUTTI, DANTE J., MD** **(MCBURNEY, MICHAEL W.)** ***Medicine, Ottawa*** Neurotransmitter plasticity of embryonal carcinoma-derived neurons **1990-91 EP Apr 90–Mar 91**	$ 38,826/89-90 41,854/90-91
2982	**MORLEY, PAUL A., PhD** **(TSANG, BENJAMIN K.)** ***Obstetrics and Gynecology, Ottawa*** Signal transduction mechanism during granulosa cell differentiation **1990-91 EP Apr 90–Mar 91**	$ 27,000/90-91
2983	**MORTARI, FRANK, PhD** **(SCHROEDER, HARRY S.)** **(COOPER, MAX D.)** ***Microbiology, Alabama*** Development of human VH repertoire **1990-91 EP Jul 90–Jun 91**	$ 13,962/89-90 28,212/90-91
2984	**MORTON, KATHERINE D., PhD** **(MACLUSKY, NEIL J.)** ***Obstetrics and Gynecology, Toronto*** Role of the neuropeptide CCK as a mediator of sex steroid effects on feeding and stress-related behaviour **1990-91 EP Apr 90–Mar 91**	$ 18,845/89-90 28,279/90-91
2985	**MOSES, RUTH M., MD** **(MASUI, YOSHIO)** ***Zoology, Toronto*** Control of cell cycles in mammalian oocytes during fertilization **1990-91 EP Apr 90–Mar 91**	$ 42,153/90-91

N° de liste	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
2986	**MUIR, GILLIAN D., DVM** **(STEEVES, JOHN D.)** ***Zoology, British Columbia*** Anatomical and functional recovery following spinal cord transection in the chick **1990-91 EP Apr 90–Mar 91**	$ 21,884/89-90 27,741/90-91
2987	**MUNOZ, DOUGLAS P., PhD** **(WURTZ, ROBERT H.)** ***National Eye Institute (Bethesda)*** Role of the primate superior colliculus in the control of saccadic eye movements **1990-91 EP Apr 90–Jun 91**	$ 39,273/90-91
2988	**MURPHY, BRIAN J., PhD** **(CATTERALL, WILLIAM A.)** ***Pharmacology, Washington (Seattle)*** Molecular mechanisms of sodium channel gating **1990-91 EP Jul 90–Jun 91**	$ 27,827/90-91
2989	**NABI, IVAN R., PhD** **(RODRIGUEZ-BOULAN, ENRIQUE)** ***Cell Biology and Anatomy, Cornell*** Transformation and the loss of epithelial polarity **1990-91 EP Jul 90–Jun 91**	$ 29,114/90-91
2990	**NASH, RICHARD A., MD** **(STORB, RAINER)** ***Medicine, Washington (Seattle)*** Investigations of hemopoiesis after bone marrow transplantation **1990-91 EP Jul 90–Sep 90**	$ 40,676/89-90 10,336/90-91
2991	**NGSEE, JOHNNY K., PhD** **(SCHELLER, RICHARD H.)** ***Biological Sciences, Stanford*** GTP-binding (G) proteins in neurons **1990-91 EP May 90–Apr 91**	$ 15,405/89-90 30,685/90-91
2992	**NGUYEN, MAI, PhD** **(DROUIN, JACQUES)** ***Institut de recherches cliniques de Montréal*** Le rôle respectif des différents éléments régulateurs du promoteur du gène de la pro-opiomélanocortine, et les différentes interactions entre protéines et DNA et protéines-protéines responsables de l'activation du gène **1990-91 EP avr 90–sep 90**	$ 29,239/89-90 14,458/90-91
2993	**NGUYEN, TIEN TUE, PhD** **(VAN OBBERGHEN, EMMANUEL)** ***INSERM (Nice)*** Analyse moléculaire du mécanisme d'action des récepteurs de l'insuline, de l'IGF-I et de l'EGF **1990-91 EP jlt 90–jui 91**	$ 28,588/90-91
2994	**NICKEL, BARBARA E., PhD** **(CATTINI, PETER A.)** ***Physiology, Manitoba*** Differential and tissue-specific expression of placental growth hormone genes **1990-91 EP Apr 90–Mar 91**	$ 27,121/89-90 30,138/90-91
2995	**NICKEL, JEFFREY C., DMD** **(MCLACHLAN, KENNETH R.)** ***Dentistry, Manitoba*** Mechanical stress in development and degeneration of the human temporomandibular joint **1990-91 EP Apr 90–Mar 91**	$ 22,878/89-90 40,407/90-91
2996	**NICOLLE, MICHAEL W., MD** **(VINCENT, ANGELA)** **(NEWSOM-DAVIS, JOHN)** ***Clinical Neurology, Oxford*** Cellular processing of human acetylcholine receptor in myasthenia gravis **1990-91 EP Jan 91–Jun 91**	$ 21,716/90-91
2997	**NOEL, GILLES, PhD** **(JULIEN, JEAN-PIERRE)** ***Montreal General Hospital*** Studies on a modulator of neurofilament gene transcription **1990-91 EP May 90–Mar 91**	$ 26,381/89-90 25,699/90-91
2998	**NOVAS-SCHMIDT, MARIA L., MD, PhD** **(TRIFARO, JOSE M.)** ***Pharmacology, Ottawa*** Characterization and molecular biology of proteins involved in chromaffin cell secretion **1990-91 EP Apr 90–Mar 91**	$ 38,628/89-90 41,645/90-91
2999	**O'CONNOR, TIMOTHY P., PhD** **(BENTLEY, DAVID R.)** ***Molecular and Cell Biology, California (Berkeley)*** Cellular and molecular mechanisms underlying neuronal pathfinding in vivo **1990-91 EP Jun 90–May 91**	$ 27,706/89-90 30,803/90-91
3000	**OHASHI, PAMELA S., PhD** **(ZINKERNAGEL, ROLF M.)** ***Pathology, Zurich*** T lymphocyte ontogeny: commitment, positive and negative selection **1990-91 EP Jul 90–Jun 91**	$ 27,361/89-90 30,469/90-91
3001	**OLIVIER, MARTIN, PhD** **(REINER, NEIL E.)** ***Medicine, British Columbia*** Signal transduction pathways in human monocytes infected with Leishmania **1990-91 EP Apr 90–Mar 91**	$ 26,906/89-90 29,912/90-91
3002	**OPLETA-MADSEN, KAREN L., PhD** **(FEDORAK, RICHARD N.)** ***Medicine, Alberta*** Na,K-ATPase alpha isoform expression in small intestine **1990-91 EP Jun 90–Mar 91**	$ 14,203/90-91
3003	**ORLOWSKI, JOHN, PhD** **(LINGREL, JERRY B.)** ***Microbiology and Molecular Genetics, Cincinnati*** Isolation and characterization of Na/H-exchanger cDNAs **1990-91 EP Jul 90**	$ 29,510/89-90 2,468/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3004	**ORSER, BEVERLEY A., MD** **(MACDONALD, JOHN F.)** ***Pharmacology, Toronto*** Mechanisms of action of dissociative anesthetics upon the function of ion channels activated by excitatory amino acids, and effects of phosphorylation of these channels on this interaction **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
3005	**OTULAKOWSKI, L. GAIL, PhD** **(GIGUERE, VINCENT)** ***Hospital for Sick Children (Toronto)*** Molecular biology of the retinoic acid receptor gene family **1990-91 EP Apr 90–Mar 91**	$ 14,545/89-90 29,686/90-91
3006	**PADMORE, RUTH F., MD** **(KLECKNER, NANCY E.)** ***Biochemistry and Molecular Biology, Harvard*** Isolation and characterization of synaptonemal complexes in Saccharomyces cerevisiae **1990-91 EP Jul 90–Mar 91**	$ 51,439/89-90 31,008/90-91
3007	**PANOS, ANTHONY, MD** **(SALERNO, TOMAS A.)** ***Surgery, Toronto*** Functional and metabolic study of continuous warm blood cardioplegia **1990-91 EP Apr 90–Jun 90**	$ 30,831/89-90 9,844/90-91
3008	**PARADIS, JEAN, MD** **(FUKS, ABRAHAM)** ***Medicine, McGill*** Characterization of the islet cell target antigen in the BB rat **1990-91 EP Apr 90–Mar 91**	$ 29,043/89-90 40,615/90-91
3009	**PARE, DENIS, PhD** **(LLINAS, RODOLFO R.)** ***Physiology and Biophysics, New York*** Cellular mechanisms underlying the genesis of PGO-waves in the whole brainstem in vitro **1990-91 EP Jun 90–May 91**	$ 6,193/89-90 28,958/90-91
3010	**PARENT, LUCIE, PhD** **(WRIGHT, ERNEST M.)** ***Physiology, California (Los Angeles)*** Structure-function relations of the Na/glucose cotransporter **1990-91 EP Jul 90–Sep 90**	$ 29,503/89-90 7,405/90-91
3011	**PARKER, JOHN D., MD** **(ST. JOHN SUTTON, MARTIN G.)** ***Medicine, Harvard*** Diastolic left ventricular performance in dilated cardiomyopathy **1990-91 EP Jul 90–Jun 91**	$ 39,589/89-90 41,390/90-91
3012	**PARKER, THOMAS G., MD** **(ROBERTS, ROBERT)** ***Medicine, Baylor*** Role of peptide growth factors and protooncogenes in cardiac gene expression and hypertrophy **1990-91 EP Jul 90–Jun 91**	$ 39,480/89-90 42,645/90-91
3013	**PARKIN, NEIL T., PhD** **(VARMUS, HAROLD E.)** ***Microbiology and Immunology, California (San Francisco)*** The maintenance of fidelity during translational elongation **1990-91 EP May 90–Apr 91**	$ 7,551/89-90 28,907/90-91
3014	**PARPIA, SALVINAZ H., PharmD** **(MORRIS, MARILYN E.)** ***Pharmacy, State University of New York (Buffalo)*** Renal sulfate homeostasis during pregnancy and disease states **1990-91 EP Jun 90–May 91**	$ 28,107/89-90 31,937/90-91
3015	**PASLOSKE, BRITTAN L., PhD** **(HOWARD, RUSSELL J.)** ***DNAX Res. Inst. Molecular & Cell Biol. (Palo Alto)*** Cloning and characterization of the Plasmodium knowlesi variant antigen on infected erythrocytes **1990-91 EP Jun 90–May 91**	$ 19,878/89-90 28,559/90-91
3016	**PAUL, TERRI L., MD** **(STILLER, CALVIN R.)** ***Medicine, Western Ontario*** Immunotherapy and islet transplantation in insulin-dependent diabetes mellitus **1990-91 EP Oct 90–Mar 91**	$ 40,009/89-90 21,973/90-91
3017	**PEDNEAULT, LOUISE, MD** **(MILLER, GEORGE)** ***Pediatrics, Yale*** Caractérisation des acides nucléiques et des protéines des lésions prolifératives EBV chez l'hôte immunodéprimé **1990-91 EP Jly 90–sep 90**	$ 40,377/89-90 10,336/90-91
3018	**PELLETIER, JERRY M., PhD** **(HOUSMAN, DAVID E.)** ***Center for Cancer Research, Massachusetts Institute of Technology*** Characterization and functional studies of the murine Wilms' tumor gene **1990-91 EP Jul 90–Jun 91**	$ 27,401/89-90 30,525/90-91
3019	**PELLETIER, NICOLAS, DMV** **(LEITH, DAVID E.)** ***Veterinary Surgery and Medicine, Kansas State*** Mechanisms of pulmonary artery "hypertension" during exercise in normal horses **1990-91 EP Jun 90–May 91**	$ 39,064/89-90 42,172/90-91
3020	**PENG, LIANG, BM** **(HERTZ, LEIF)** ***Pharmacology, Saskatchewan*** Regulation of transmitter release of glutamate from cultured cerebellar granule neurons **1990-91 EP Jun 91–Mar 91**	$ 11,636/90-91
3021	**PENN, ANDREW M.W., MB** **(EISEN, ANDREW A.)** ***Medicine, British Columbia*** Cellular energy metabolism and its role in neurological disease: a correlative clinical, spectroscopic and electrophysiological study **1990-91 EP Apr 90–Jul 90**	$ 40,296/89-90 13,289/90-91

List No.	Grant/Award	Financial History
3022	**PERREAULT, JEAN-PIERRE, PhD** **(ALTMAN, SIDNEY)** ***Biology, Yale*** Inactivation of RNA by RNase P **1990-91 EP Nov 90–Apr 91**	$ 14,386/90-91
3023	**PERREAULT, PAUL, DMV** **(AVOLI, MASSIMO)** ***Neurologie et neurochirurgie, McGill*** Etude des seconds messagers impliqués dans les effets de la 4-aminopyridine **1990-91 EP avr 90–jui 90**	$ 34,993/89-90 8,650/90-91
3024	**PERRY, MARC D., PhD** **(WOOD, WILLIAM B.)** ***Molecular, Cellular and Developmental Biology, Colorado (Boulder)*** Characterization of genes that alter embryonic determination in C. elegans **1990-91 EP Jan 90–May 91**	$ 27,748/89-90 30,862/90-91
3025	**PEWARCHUK, WILLIE J., MD** **(MACGILLIVRAY, ROSS T.A.)** ***Biochemistry, British Columbia*** Molecular analysis of hemophilia B in western Canada **1990-91 EP Aug 90–Mar 91**	$ 28,687/90-91
3026	**PHIPPS, BARRY M., PhD** **(BAUMEISTER, WOLFGANG)** ***Max-Planck-Institut fur Biochemie (Munich)*** Three-dimensional structure analysis of Aeromonas salmonicida S-layer **1990-91 EP May 90–Apr 91**	$ 27,621/89-90 34,435/90-91
3027	**PICCARDO, C. PEDRO, MD** **(CUELLO, A. CLAUDIO G.)** ***Pharmacology and Therapeutics, McGill*** Early cell death markers in neurological degenerative disorders **1990-91 EP Sep 90–Mar 91**	$ 25,418/90-91
3028	**PICHORA-FULLER, M. KATHLEEN, PhD** **(JOHNSTON, JUDITH R.)** ***Audiology and Speech Sciences, British Columbia*** Communication function in the hearing-impaired elderly **1990-91 EP Mar 91**	$ 4,201/90-91
3029	**PIEDBOEUF, BRUNO, MD** **(PHELPS, DALE L.)** **(HOROWITZ, STUART)** ***Pediatrics, Rochester*** Glucocorticoids and growth factors in lung development **1990-91 EP Jul 90–Jun 91**	$ 4[illegible]/90-91
3030	**PIKE, G. BRUCE, PhD** **(GLOVER, GARY H.)** ***Diagnostic Radiology and Nuclear Medicine, Stanford*** Investigation of rapid magnetic resonance imaging techniques for cardiac and blood flow imaging **1990-91 EP Oct 90–Jun 91**	$ 21,512/90-91
3031	**PIND, STEVEN N., PhD** **(BALCH, WILLIAM E.)** ***Scripps Clinic and Research Foundation (La Jolla)*** Role of GTP in the regulation of endoplasmic reticulum to Golgi transport **1990-91 EP Jun 90–May 91**	$ 20,639/89-90 28,611/90-91
3032	**PLANTE, CLAIRE, DMV, PhD** **(MILLER, RICHARD B.)** ***Veterinary Pathology, Guelph*** Investigations into the pathogenesis of Ureaplasma-induced embryonic death **1990-91 EP Apr 90–Mar 91**	$ 24,269/89-90 42,153/90-91
3033	**PLOURDE, PIERRE J., MD** **(PLUMMER, FRANCIS A.)** ***Medical Microbiology, Manitoba*** Male to female transmission of human immunodeficiency virus **1990-91 EP Apr 90–Jun 90**	$ 29,935/89-90 9,545/90-91
3034	**POIRIER, DONALD, PhD** **(LABRIE, FERNAND)** ***Physiologie, Laval*** Contrôle hormonal de la prolifération cellulaire de tumeurs mammaires **1990-91 EP avr 90**	$ 29,239/89-90 2,351/90-91
3035	**PORTER, DUNCAN W.F., PhD** **(PITTMAN, QUENTIN J.)** ***Medical Physiology, Calgary*** Electrophysiology of neuropeptide Y in paraventricular nucleus **1990-91 EP Mar 91**	$ 3,468/90-91
3036	**POULIN, RICHARD, PhD** **(PEGG, ANTHONY E.)** ***Cellular and Molecular Physiology, Pennsylvania State*** Molecular characterization and ionic regulation of ornithine decarboxylase **1990-91 EP May 90–Apr 91**	$ 27,201/89-90 30,248/90-91
3037	**POWER, CHRISTOPHER N., MD** **(JOHNSON, RICHARD T.)** ***Neurology, Johns Hopkins*** Immunological and molecular biological mechanisms of HIV encephalopathy **1990-91 EP Jan 91–Jun 91**	$ 20,720/90-91
3038	**PROKIPCAK, REBECCA D., PhD** **(ROSS, JEFFREY)** ***Oncology, Wisconsin*** Pathways of c-myc mRNA turnover and regulation **1990-91 EP Jan 91–Jun 91**	$ 14,512/90-91
3039	**PRYZDIAL, EDWARD L.G., PhD** **(MANN, KENNETH G.)** ***Biochemistry, Vermont*** Macromolecular interactions within coagulation **1990-91 EP May 90–Jul 90**	$ 28,481/89-90 7,170/90-91

N° de liste	Subvention/Bourse	Résumé financier

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3040	**QIU, RONG, BM** **(SCHIMMER, BERNARD P.)** ***Banting and Best Department of Medical Research, Toronto*** Genetic analysis of forskolin-activated adenylyl cyclase **1990-91 EP Sep 90–Mar 91**	$ 25,137/90-91
3041	**QUAN, FRANKLIN, PhD** **(FORTE, MICHAEL A.)** ***Vollum Institute for Advanced Biomedical Research, Oregon Health Sciences University (Portland)*** G protein mediated signal transduction in Drosophila melanogaster **1990-91 EP Jul 90–Jun 91**	$ 29,510/89-90 30,920/90-91
3042	**RADOUX, VICTOR M., MD** **(STROMINGER, JACK L.)** ***Dana-Farber Cancer Institute (Boston)*** Molecular genetic analysis of major histocompatibility complex and T cell receptor usage in sarcoidosis **1990-91 EP Jul 90–Jun 91**	$ 40,675/89-90 42,644/90-91
3043	**RAHAL, M. DWAYNE, DMD** **(OSMOND, DENNIS G.)** ***Anatomy, McGill*** Characterization of a null small lymphocyte lineage in the bone marrow **1990-91 EP Apr 90–Jun 90**	$ 34,993/89-90 8,650/90-91
3044	**RAMIREZ, JAN-MARINO, PhD** **(PEARSON, KEIR G.)** ***Physiology, Alberta*** Neuronal mechanisms for hormonal regulation of rhythmic behavior **1990-91 EP Apr 90–Mar 91**	$ 29,239/89-90 30,568/90-91
3045	**RANCOURT, DERRICK E., PhD** **(CAPECCHI, MARIO R.)** ***Biology, Utah*** Targeted mutagenesis of mouse homeobox genes in embryonic stem cells **1990-91 EP Jun 90–May 91**	$ 27,003/89-90 29,004/90-91
3046	**READ, RONALD R., PhD, MD** **(CROSA, JORGE H.)** ***Microbiology and Immunology, Oregon Health Sciences University (Portland)*** Molecular analysis of iron uptake as a virulence factor in invasive enteric bacteria **1990-91 EP Jan 91–Jun 91**	$ 20,900/90-91
3047	**RENIER, GENEVIEVE, MD, PhD** **(BRAZEAU, PAUL)** ***Nutrition, Montréal*** Contrôle de la sécrétion de l'hormone de croissance chez le rat obèse **1990-91 EP avr 90–août 90**	$ 39,810/89-90 16,490/90-91
3048	**RESETKOVA, ERIKA, MD, PhD** **(VOLPE, ROBERT)** ***Medicine, Toronto*** Immunological aspects of thyroid disease **1990-91 EP Jul 90–Mar 91**	$ 34,729/90-91

N° de liste	Subvention/Bourse	Résumé financier
3049	**RIDDICK, DAVID S., PhD** **(OKEY, ALLAN B.)** ***Pharmacology, Toronto*** Determinants of efficacy in Ah receptor-mediated responses **1990-91 EP Sep 90–Mar 91**	$ 16,473/90-91
3050	**RIDSDALE, J. ANDREW, PhD** **(CLEGG, JAMES S.)** ***Zoology, California*** An analysis of "soluble proteins" in normal and virus-transformed mammalian cells **1990-91 EP Jan 91–Jun 91**	$ 15,605/90-91
3051	**RILEY WATSON, DOONE P., DVM** **(BEFUS, A. DEAN)** ***Microbiology and Infectious Diseases, Calgary*** The immunological basis for the clinical spectrum in giardiasis **1990-91 EP Apr 90**	$ 35,376/89-90 2,883/90-91
3052	**RIVEST, SERGE, PhD** **(RIVIER, CATHERINE L.)** ***Salk Institute (La Jolla)*** Les mécanismes d'action hypothalamique du CRF et des opioides sur l'inhibition de la LHRH durant le stress **1990-91 EP jlt 90–jui 91**	$ 29,641/90-91
3053	**ROBERTSON, GEORGE S., PhD** **(FIBIGER, H. CHRISTIAN)** ***Psychiatry, British Columbia*** In vivo neuropharmacology of central dopaminergic neurons **1990-91 EP Apr 90–Mar 91**	$ 16,894/89-90 28,053/90-91
3054	**ROBITAILLE, RICHARD, PhD** **(CHARLTON, MILTON P.)** ***Physiology, Toronto*** Location and conductance of presynaptic calcium channels **1990-91 EP Apr 90–Feb 91**	$ 28,617/89-90 27,625/90-91
3055	**RODD, CELIA J., MD** **(OPPENHEIMER, JACK H.)** ***Medicine, Minnesota*** C-erb A receptor mRNA content in regions of the adult and developing rat brain **1990-91 EP Aug 90–Apr 91**	$ 30,651/90-91
3056	**ROMMENS, JOHANNA M., PhD** **(TSUI, LAP-CHEE)** ***Hospital for Sick Children (Toronto)*** Molecular cloning of the cystic fibrosis locus **1990-91 EP Apr 90–May 90**	$ 29,239/89-90 4,702/90-91
3057	**ROSEN, ANDREI S., MD** **(MORRIS, MARY E.)** ***Pharmacology, Ottawa*** Anoxia and ionic mechanisms **1990-91 EP Apr 90–Mar 91**	$ 30,831/89-90 42,153/90-91
3058	**ROTIN, DANIELA, PhD** **(SCHLESSINGER, JOSEPH)** ***Pharmacology, New York*** Role of epidermal growth factor receptor in signal transduction and mitogenesis **1990-91 EP Apr 90–Jun 91**	$ 27,190/89-90 36,439/90-91

List No.	Grant/Award	Financial History
3059	**ROTTAPEL, ROBERT K., MD** **(BERNSTEIN, ALAN)** ***Mount Sinai Hospital (Toronto)*** The molecular biological defects of the kit oncogene in the W mouse **1990-91 EP Apr 90–Mar 91**	$ 29,043/89-90 40,615/90-91
3060	**ROUSSEAU, FRANCOIS, MD** **(MANDEL, JEAN-LOUIS)** ***Chimie biologique, Université Louis Pasteur (Strasbourg)*** Cartographie génétique et physique de la région du X fragile **1990-91 EP jlt 90–déc 90**	$ 38,885/89-90 20,045/90-91
3061	**RUBIN, BARRY B., MD** **(WALKER, PAUL M.)** ***Surgery, Toronto*** Contribution of white blood cells and complement to skeletal muscle ischemia/reperfusion injury **1990-91 EP Apr 90–Mar 91**	$ 37,198/90-91
3062	**RUIJS, THEODORA C.G., MD** **(ANTEL, JACK P.)** ***Neurology and Neurosurgery, McGill*** Human oligodendrocyte response to immune and glial derived factors **1990-91 EP Apr 90–Mar 91**	$ 23,673/89-90 34,123/90-91
3063	**RUSE, N. DORIN, PhD** **(SMITH, DENNIS C.)** ***Dentistry, Toronto*** Adhesion to tooth and biomaterial surfaces **1990-91 EP Apr 90–Jun 90**	$ 24,861/89-90 6,623/90-91
3064	**RUSSNAK, ROLAND H., PhD** **(GANEM, DONALD)** ***Microbiology and Immunology, California (San Francisco)*** Control of 3' end formation in hepatitis B virus **1990-91 EP May 90–Jun 91**	$ 26,749/89-90 23,279/90-91
3065	**SABRY, JAMES H., MD** **(KIRSCHNER, MARC W.)** ***Biochemistry and Biophysics, California (San Francisco)*** Microtubule dynamics in neuronal growth cones **1990-91 EP Jun 90–May 91**	$ 42,480/90-91
3066	**SALTIEL, PHILIPPE, MD** **(ROSSIGNOL, SERGE)** ***Physiologie, Montréal*** Etude des déterminants centraux et périphériques de la modulation des réflexes cutanés pendant la locomotion **1990-91 EP avr 90–jui 90**	$ 40,296/89-90 9,844/90-91
3067	**SAMBHARA, SURYAPRAKASH R., BVSc** **(MILLER, RICHARD G.)** ***Immunology, Toronto*** Characterization of CD3+ cytolytic effector cells **1990-91 EP Apr 90–Mar 91**	$ 30,831/89-90 42,153/90-91

N° de liste	Subvention/Bourse	Résumé financier
3068	**SCHREIBER, RICHARD A., MD** **(FUKS, ABRAHAM)** ***Medicine, McGill*** The immunology of extrahepatic bile duct epithelial cell injury **1990-91 EP Apr 90–Jun 90**	$ 40,296/89-90 9,844/90-91
3069	**SCHWARTZ, CAROL J.E., PhD** **(KORNBERG, THOMAS B.)** ***Biochemistry and Biophysics, California (San Francisco)*** Protein interactions and developmental gene regulation in D. melanogaster **1990-91 EP Aug 90–Apr 91**	$ 20,080/90-91
3070	**SEARLES, GORDON E., MD** **(JIMBOW, KOWICHI)** ***Medicine, Alberta*** Structure and function of phorbor-ester stimulated melanocytes **1990-91 EP Apr 90–Mar 91**	$ 28,607/89-90 39,080/90-91
3071	**SEKHON, HARMANJATINDER S., MBBS** **(THURLBECK, WILLIAM M.)** ***Pathology, British Columbia*** The effect of hypobaria and/or hypoxia on lung growth **1990-91 EP Apr 90–Mar 91**	$ 24,367/89-90 38,871/90-91
3072	**SELIN, LIISA K., MD** **(WILKINS, JOHN A.)** ***Medicine, Manitoba*** Non-major histocompatibility complex restricted killer cell induction by lymphoblastoid lines **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
3073	**SEOW, CHUN Y., PhD** **(FORD, LINCOLN E.)** ***Medicine, Chicago*** Metabolic effects on contraction of skinned cardiac muscle **1990-91 EP Jul 90–Jun 91**	$ 26,070/89-90 29,113/90-91
3074	**SHARP, CECIL B., DMD, PhD** **(WILLARD, HUNTINGTON F.)** ***Genetics, Stanford*** Fine-scale mapping and characterization of X isochromosome breakpoints in humans **1990-91 EP Jun 90–May 91**	$ 43,471/89-90 40,924/90-91
3075	**SHERKER, AVERELL H., MD** **(ROBINSON, WILLIAM S.)** ***Internal Medicine, Stanford*** Study of the role of activated oncogenes in human hepatocellular carcinoma **1990-91 EP Jun 90–May 91**	$ 40,903/89-90 43,781/90-91
3076	**SHEVELL, MICHAEL I., MD** **(ROSENBLATT, DAVID S.)** ***Royal Victoria Hospital (Montreal)*** Molecular studies in methylmalonic aciduria **1990-91 EP Jul 90–Mar 91**	$ 31,368/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3077	**SHWORAK, NICHOLAS W., MD, PhD** **(GEDAMU, LASHITEW)** ***Biological Sciences, Calgary*** Functional analysis of metallothionein promoter fine structure **1990-91 EP Apr 90–Jun 90**	$ 34,992/89-90 8,650/90-91
3078	**SIMARD, MARIE F., MD** **(GOODYER, CYNTHIA G.)** ***Pediatrics, McGill*** Comparative study of tissue growth hormone receptors and serum growth hormone binding proteins in humans **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
3079	**SIMOES DE BIVAR CUMANO, ANA M., MD** **(PAIGE, CHRISTOPHER J.)** ***Medical Biophysics, Toronto*** Further studies on hematopoietic precursors in fetal liver cell populations **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,154/90-91
3080	**SIMONSEN, J. NEIL, MD** **(ROTTMAN, FRITZ)** **(MAHMOUD, ADEL A.F.)** ***Medicine, Case Western Reserve*** Characterization of 3-hydroxy-3-methylglutaryl coenzyme A reductase from Schistosoma mansoni **1990-91 EP Jun 90**	$ 30,831/89-90 3,467/90-91
3081	**SINCLAIR, ALISON, PhD** **(FINDLAY, JOHN)** ***Biochemistry, Leeds*** Structural studies on membrane proteins **1990-91 EP Jul 90–Jun 91**	$ 29,510/89-90 30,920/90-91
3082	**SINGER, GARY G., MD** **(KELLEY, VICKI E.)** ***Medicine, Harvard*** Regulation and function of intercellular adhesion molecules on proximal tubules **1990-91 EP Jul 90–Jun 91**	$ 35,120/90-91
3083	**SIROIS, JEAN, DMV, PhD** **(RICHARDS, JOANNE S.)** ***Cell Biology, Baylor*** Hormonal control of the cholesterol side-chain cleavage cytochrome (P450scc) gene **1990-91 EP Jul 90–Jun 91**	$ 38,290/89-90 42,690/90-91
3084	**SIU, SAMUEL C.B., MD** **(WEYMAN, ARTHUR E.)** ***Medicine, Harvard*** Spatial and temporal heterogeneity of post-ischemic myocardial energetics and function **1990-91 EP Jul 90–Jun 91**	$ 42,645/90-91
3085	**SKEA, DANNA L., PhD** **(BARBER, BRIAN H.)** ***Immunology, Toronto*** Adjuvant-independent approaches to the delivery of subunit and synthetic peptide vaccines **1990-91 EP Apr 90–Mar 91**	$ 15,749/89-90 28,053/90-91

N° de liste	Subvention/Bourse	Résumé financier
3086	**SKERJANC, ILONA S., PhD** **(MACLENNAN, DAVID H.)** ***Banting and Best Department of Medical Research, Toronto*** Site-specific mutagenesis of Ca2+ ATPases and phospholamban **1990-91 EP Apr 90–Mar 91**	$ 10,589/89-90 27,677/90-91
3087	**SMART, NORA L., DVM** **(CHARLTON, KENNETH M.)** **(JOHNSON-LUSSENBURG, C. MARGARET)** ***Microbiology and Immunology, Ottawa*** Pathogenesis of rabies, primarily mechanisms of behavioral modifications as induced by rabies virus infection **1990-91 EP Apr 90–Mar 91**	$ 34,893/89-90 17,937/90-91
3088	**SMITH, YOLAND, PhD** **(DELONG, MAHLON R.)** ***Neurology, Johns Hopkins*** Organisation anatomique et fonctionnelle du noyau sousthalamique chez le primate **1990-91 EP jui 90–mai 91**	$ 29,282/89-90 32,887/90-91
3089	**SOLOMON, PETER H., MD** **(CASTELLUCCI, VINCENT F.)** ***Institut de recherches cliniques de Montréal*** Cellular signals mediating long-term sensitization in the marine mollusk Aplysia **1990-91 EP avr 90–jui 90**	$ 21,884/89-90 6,861/90-91
3090	**SORISKY, ALEXANDER, MD** **(RITTENHOUSE, SUSAN E.)** ***Biochemistry, Vermont*** The effect of platelet membrane cholesterol on the regulation of phospholipase A2 **1990-91 EP Jul 90–Jun 91**	$ 40,675/89-90 42,644/90-91
3091	**SOSSIN, WAYNE S., PhD** **(SCHWARTZ, JAMES H.)** ***Howard Hughes Medical Institute, Columbia*** The role of protein kinase C in presynaptic facilitation **1990-91 EP Jun 90–May 91**	$ 19,878/89-90 28,559/90-91
3092	**SPANER, DAVID E., MD** **(PHILLIPS, ROBERT A.)** **(MESSNER, HANS A.)** ***Hospital for Sick Children (Toronto)*** Graft versus host disease in SCID mice **1990-91 EP Apr 90–Mar 91**	$ 25,960/89-90 40,511/90-91
3093	**SPARKS, DANIEL L., PhD** **(PHILLIPS, MICHAEL C.)** ***Physiology and Biochemistry, Medical College of Pennsylvania (Philadelphia)*** The effect of lipid composition on apoprotein A-I conformation in high density lipoprotein **1990-91 EP Apr 90–Jun 91**	$ 37,487/90-91
3094	**SPEARMAN, MAUREEN A., PhD** **(WRIGHT, JAMES A.)** ***Biochemistry and Molecular Biology, Manitoba*** The role of integrins in cellular adhesion of the metastatic phenotype **1990-91 EP Apr 90–Mar 91**	$ 27,328/89-90 30,353/90-91

List No.	Grant/Award	Financial History
3095	**STALKER, MARGARET J., DVM** **(HAYES, MICHAEL A.)** ***Veterinary Pathology, Guelph*** Loss of resistance to carcinogens during cancer progression **1990-91 EP May 90–Mar 91**	$ 27,486/90-91
3096	**STARR, TERENCE V.B., PhD** **(SNUTCH, TERRANCE P.)** ***Psychiatry, British Columbia*** Molecular dissection of neurotransmitter receptors **1990-91 EP Jan 91–Mar 91**	$ 7,803/90-91
3097	**STEINHART, A. HILLARY, MD** **(JENKINS, DAVID J.A.)** ***Nutritional Sciences, Toronto*** Short chain fatty acid production and utilization in normal and diseased colon **1990-91 EP Jul 90–Mar 91**	$ 31,368/90-91
3098	**STEMMER, BRIGITTE E., MD, PhD** **(JOANETTE, YVES)** ***Orthophonie et audiologie, Montréal*** Speech act production in brain-damaged patients **1990-91 EP oct 90–mar 91**	$ 16,099/90-91
3099	**STEWART, A. KEITH, MBChB** **(SCHWARTZ, ROBERT S.)** ***Medicine, Tufts*** Immunoglobulin V genes of malignant lymphomas **1990-91 EP Jul 90–Jun 91**	$ 41,390/90-91
3100	**STEWART, LAURA C., PhD** **(DESLAURIERS, ROXANNE M.)** ***National Research Council of Canada (Ottawa)*** Energetics and cation metabolism in isolated, perfused hearts using in vivo phosphorus-31, sodium-23, and potassium-39 nuclear magnetic resonance **1990-91 EP May 90–Jan 91**	$ 28,092/89-90 22,039/90-91
3101	**STRATHDEE, CRAIG A., PhD** **(BUCHWALD, MANUEL)** ***Hospital for Sick Children (Toronto)*** Identification of genes involved in the cellular response to mitomycin C **1990-91 EP Apr 90–Mar 91**	$ 19,878/89-90 28,354/90-91
3102	**SULLIVAN, MARGARET J., PhD** **(RENAUD, LEO P.)** ***Medicine, Ottawa*** Influence of neuropeptides on plasma vasopressin and oxytocin secretion **1990-91 EP May 90–Mar 91**	$ 18,262/89-90 28,217/90-91
3103	**SUZUKI, SHINGO, MD** **(DHALLA, NARANJAN S.)** ***Physiology, Manitoba*** Sarcolemmal Ca2+ translocation in congestive heart failure **1990-91 EP Jul 90–Mar 91**	$ 31,368/90-91
3104	**SWALLOW, CAROL J., MD** **(ROTSTEIN, ORI D.)** ***Surgery, Toronto*** Cytoplasmic pH regulation in the macrophage by a novel Na+ and HCO3- independent mechanism **1990-91 EP Apr 90–Mar 91**	$ 25,960/89-90 40,511/90-91
3105	**SWEENEY, MARVA I., PhD** **(DOLPHIN, ANNETTE)** ***St. George's Hospital (London, England)*** Modulation of synaptic responses in cultured neurons **1990-91 EP May 90–Apr 91**	$ 29,405/90-91
3106	**SZOSTAK, CAROLYN M., PhD** **(WEINGARTNER, HERBERT)** ***National Institute of Mental Health (Bethesda)*** Psychobiology of cognitive functions in the affective disorders **1990-91 EP Jul 90–Jun 91**	$ 27,400/89-90 30,525/90-91
3107	**TABRIZCHI, REZA, PhD** **(TRIGGLE, CHRISTOPHER R.)** ***Pharmacology and Therapeutics, Calgary*** The role of G-proteins in calcium influx **1990-91 EP Jul 90–Mar 91**	$ 23,515/90-91
3108	**TCHAKAROV, LIOUBEN E., MD, PhD** **(TRIFARO, JOSE M.)** ***Pharmacology, Ottawa*** Role of actin and its severing proteins in cytoplasmic viscosity and secretion **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
3109	**TEARE, GARY F., DVM** **(THORBURN, MARGARET A.)** ***Population Medicine, Guelph*** Evaluation of the use of antimicrobials and other chemotherapeutics in fish farming **1990-91 EP Apr 90–Mar 91**	$ 28,453/89-90 34,519/90-91
3110	**THEODORESCU, DAN, MD** **(KERBEL, ROBERT S.)** ***Medical Genetics, Toronto*** Transforming growth factor-beta as a molecular mediator of tumor progression **1990-91 EP Apr 90–Mar 91**	$ 35,756/90-91
3111	**THOMAS, K. FLORIAN P., MD** **(JOLICOEUR, PAUL)** ***Institut de recherches cliniques de Montréal*** Retrovirus-induced neurodegenerative disease: mapping of the env gp70 domain responsible for disease **1990-91 EP août 90–mar 91**	$ 27,301/90-91
3112	**THOMASSIN, HELENE D., PhD** **(BELANGER, LUC)** ***Biochimie, Laval*** Régulation du gène de l'alpha-1-foetoprotéine du rat **1990-91 EP avr 90–août 90**	$ 28,538/89-90 11,989/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3113	**TIBERI, MARIO, PhD** **(CARON, MARC G.)** ***Cell Biology, Duke*** Sequencing and cloning of the D1-dopamine receptor **1990-91 EP Jul 90–Jun 91**	$ 6,192/89-90 29,311/90-91
3114	**TISCH, ROLAND M., PhD** **(MCDEVITT, HUGH O.)** ***Medical Microbiology, Stanford*** Isolation of pancreatic beta cell specific autoantigens **1990-91 EP Jun 90–May 91**	$ 6,192/89-90 28,958/90-91
3115	**TOBE, SHELDON W., MD** **(SKORECKI, KARL L.)** ***Medicine, Toronto*** Mechanisms of resistance to atrial natriuretic peptide in cirrhosis with ascites **1990-91 EP Jul 90–Mar 91**	$ 30,430/90-91
3116	**TONIN, PATRICIA N., PhD** **(CAVENEE, WEBSTER C.)** ***Ludwig Institute for Cancer Research, Royal Victoria Hospital (Montreal)*** Disruption of MyoD1 gene expression in rhabdomyosarcomas **1990-91 EP Apr 90–Mar 91**	$ 14,717/89-90 27,978/90-91
3117	**TOYOFUKU, TOSHIHIKO, MD, PhD** **(MACLENNAN, DAVID H.)** ***Banting and Best Department of Medical Research, Toronto*** Expression and site-specific mutagenesis of cardiac and skeletal muscle ryanodine receptor cDNAs **1990-91 EP Feb 91–Mar 91**	$ 8,191/90-91
3118	**TRIGGS-RAINE, BARBARA L., PhD** **(GRAVEL, ROY A.)** ***Pediatrics, McGill*** Genetic and biochemical characterization of hexosaminidase deficiency **1990-91 EP Apr 90–Mar 91**	$ 28,682/89-90 30,568/90-91
3119	**TROTTER, MARTIN J., MD** **(OLIVE, PEGGY L.)** ***Pathology, British Columbia*** Transient perfusion and acute hypoxia in experimental tumours **1990-91 EP Apr 90–Jun 90**	$ 34,993/89-90 8,650/90-91
3120	**TUCK, ALAN B., MD** **(CHAMBERS, ANN F.)** ***Oncology, Western Ontario*** A genetic study of malignancy and the metastatic phenotype **1990-91 EP Apr 90–Mar 91**	$ 34,594/89-90 38,662/90-91
3121	**TURHAN, ALI G., MD** **(EAVES, CONNIE J.)** ***Pathology, British Columbia*** Clonality of normal and malignant cell populations **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,154/90-91
3122	**TURKSEN, KURSAD, PhD** **(FUCHS, ELAINE V.)** ***Molecular Genetics and Cell Biology, Chicago*** Relative roles of transforming growth factor-beta and retinoids in controlling epidermal differentiation **1990-91 EP Dec 90–May 91**	$ 14,468/90-91
3123	**TWEED, DOUGLAS B., MD, PhD** **(DICHGANS, J.)** ***Neurology, Eberhard-Karls-Universitat (Tubingen)*** Physiology and pathophysiology of the human oculomotor system **1990-91 EP Jul 90–Dec 90**	$ 48,252/89-90 21,346/90-91
3124	**TYERS, MICHAEL D., PhD** **(FUTCHER, A. BRUCE)** ***Cold Spring Harbor Laboratory*** Control of cell division by the cyclin homolog WHI1 **1990-91 EP Jul 90–Jun 91**	$ 26,070/89-90 29,114/90-91
3125	**TYMIANSKI, MICHAEL, MD** **(TATOR, CHARLES H.)** ***Surgery, Toronto*** Pathophysiology and treatment of spinal cord injury **1990-91 EP Jul 90–Mar 91**	$ 26,665/90-91
3126	**TYNDALL, MARK W., MD** **(PLUMMER, FRANCIS A.)** ***Medical Microbiology, Manitoba*** Post-exposure prophylaxis of human immunodeficiency virus infection with azidothymidine **1990-91 EP Apr 90–Mar 91**	$ 14,263/89-90 37,825/90-91
3127	**VAN DE LAVOIR, MARIE-CECILE P.G., DVM** **(BETTERIDGE, KEITH J.)** ***Biomedical Sciences, Guelph*** Female germ-cell and embryo manipulation in cattle **1990-91 EP May 90–Mar 91**	$ 22,204/90-91
3128	**VAN DER ZEE, CATHARINA E.E.M., PhD** **(DIAMOND, JACK)** ***Biomedical Sciences, McMaster*** Evidence for a compromising of nerve growth factor-related functions in the aging brain **1990-91 EP Jul 90–Mar 91**	$ 19,724/90-91
3129	**VANDERHYDEN, BARBARA C., PhD** **(EPPIG, JOHN J.)** ***Jackson Laboratory (Bar Harbor, Maine)*** Role of the oocyte in granulosa cell function and development **1990-91 EP May 90–Jan 91**	$ 26,772/89-90 22,475/90-91
3130	**VERGE, VALERIE M.K., PhD** **(HOKFELT, TOMAS)** ***Histology, Karolinska Institutet (Stockholm)*** Galanin and other peptides and NGF in injured sensory neurons **1990-91 EP Jan 91–Jun 91**	$ 15,222/90-91

N° de liste	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
3131	**VIDAL-SANZ, MANUEL, MD, PhD** **(RASMINSKY, MICHAEL)** ***Montreal General Hospital*** Characterization of synapse formation in the superior colliculus by regenerating retinal ganglion cell axons **1990-91 EP Apr 90**	$ 40,296/89-90 5,655/90-91
3132	**VILLAR, JESUS, MD, PhD** **(SLUTSKY, ARTHUR S.)** ***Medicine, Toronto*** Effect of heat-shock proteins in animal models of acute lung injury **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
3133	**VINCENT, RENAUD, PhD** **(CRAPO, JAMES D.)** ***Medicine, Duke*** Toxicité pulmonaire des polluants atmosphériques **1990-91 EP jui 90–mai 91**	$ 27,281/89-90 29,478/90-91
3134	**WADDELL, THOMAS K., MD** **(PATTERSON, G. ALEXANDER)** ***Surgery, Toronto*** The effect of pulmonary preservation at moderate hypothermia **1990-91 EP Jul 90–Mar 91**	$ 26,665/90-91
3135	**WAGNER, J. RICHARD, PhD** **(AMES, BRUCE N.)** ***Biochemistry, California (Berkeley)*** Endogenous DNA damage related to aging and cancer **1990-91 EP Jun 90–May 91**	$ 22,343/89-90 30,359/90-91
3136	**WALKER, DAVID C., MD** **(MCINNES, RODERICK R.)** ***Hospital for Sick Children (Toronto)*** A molecular analysis of human argininosuccinate lyase deficiency **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
3137	**WALL, KATHARINE M., PhD** **(GROSS, PAUL M.)** ***Surgery, Queen's*** Circumventricular organs: vascular morphology and tissue metabolism **1990-91 EP Apr 90–Sep 90**	$ 28,395/89-90 14,458/90-91
3138	**WALTER, MICHAEL A., PhD** **(GOODFELLOW, PETER N.)** ***Imperial Cancer Research Fund Lab. (London, Eng.)*** Molecular analysis of sex determination and differentiation in man **1990-91 EP Jan 91–Jun 91**	$ 15,269/90-91
3139	**WALTON, PAUL A., PhD** **(FERAMISCO, JAMES R.)** ***Medicine, California (San Diego)*** Transformation by oncogenes **1990-91 EP Jul 90–Dec 90**	$ 29,510/89-90 14,810/90-91
3140	**WANG, CHEN, MD** **(MCCULLOCH, ERNEST A.)** ***Ontario Cancer Institute (Toronto)*** Clinical applications of regulatory mechanisms in acute myeloblastic leukemia **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
3141	**WANG, CHIAYENG C., PhD** **(STILES, CHARLES D.)** ***Microbiology and Molecular Genetics, Harvard*** Studies on the expression and regulation of platelet-derived growth factor and its receptor in murine embryonal cells **1990-91 EP Jun 90–May 91**	$ 27,706/89-90 30,803/90-91
3142	**WANG, JIAN, MD, PhD** **(BROWN, JOHN C.)** ***Physiology, British Columbia*** Intracellular Ca fluxes in beta cells of the pancreatic islets of man and experimental animal models **1990-91 EP Apr 90–Mar 91**	$ 42,153/90-91
3143	**WARD, MICHAEL E., MD** **(MACKLEM, PETER T.)** ***Medicine, McGill*** Effect of inanition and deconditioning on the respiratory muscles **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
3144	**WATSON, ANDREW J., PhD** **(SCHULTZ, GILBERT A.)** ***Medical Biochemistry, Calgary*** Developmental changes in response to transfected genes in mouse embryos **1990-91 EP Apr 90–Mar 91**	$ 15,749/89-90 28,053/90-91
3145	**WATSON, PETER H., MBBCh** **(SHIU, ROBERT P.C.)** ***Physiology, Manitoba*** Molecular biology of estrogen action in human breast cancer **1990-91 EP Apr 90**	$ 38,826/89-90 3,182/90-91
3146	**WEBER, JEAN-MICHEL, PhD** **(TAYLOR, C. RICHARD)** ***Organismal and Evolutionary Biology, Harvard*** Functional and structural limitations to metabolic fuel delivery in skeletal muscle **1990-91 EP Apr 90–Dec 90**	$ 23,163/90-91
3147	**WELHAM, MELANIE J., PhD** **(SCHRADER, JOHN W.)** ***Medicine, British Columbia*** Molecular identification of novel regulators of hemopoiesis **1990-91 EP May 90–Mar 91**	$ 25,473/90-91
3148	**WELLINGTON, CHERYL L., PhD** **(BELASCO, JOEL G.)** ***Microbiology and Molecular Genetics, Harvard*** Mechanisms of messenger RNA degradation **1990-91 EP Nov 90–Apr 91**	$ 15,113/90-91
3149	**WEST, KENNETH A., MD** **(AUSIELLO, DENNIS A.)** ***Medicine, Harvard*** Guanine nucleotide regulatory (G) protein gene expression in the kidney **1990-91 EP Jul 90–Jun 91**	$ 40,140/90-91

N° de liste	Subvention/Bourse	Résumé financier

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3150	**WESTERLUND, JOHN A.R., MD** **(WEISGRABER, KARL H.)** ***Pathology, California (San Francisco)*** Structure-function of apolipoprotein E **1990-91 EP Jun 90–May 91**	$ 31,330/89-90 40,924/90-91
3151	**WILD, GARY E., PhD, MD** **(BENNETT, GARY C.)** ***Anatomy, McGill*** Role of polyamines in postnatal intestinal development **1990-91 EP Apr 90–Mar 91**	$ 38,826/89-90 41,854/90-91
3152	**WILKINSON, MARSHALL F., PhD** **(PITTMAN, QUENTIN J.)** ***Medical Physiology, Calgary*** Electrophysiology of AVP action **1990-91 EP Oct 90–Mar 91**	$ 15,117/90-91
3153	**WILSON, JEFFREY B., DVM** **(GYLES, CARLTON L.)** ***Veterinary Microbiology and Immunology, Guelph*** Epidemiology of verotoxigenic E. coli in Ontario dairy cattle **1990-91 EP Apr 90–Mar 91**	$ 38,033/89-90 40,367/90-91
3154	**WILSON, PAULA J., PhD** **(CARBONETTO, SALVATORE T.)** ***Montreal General Hospital*** Integrin-cytoskeletal interactions in growth cones **1990-91 EP Apr 90–Mar 91**	$ 19,986/89-90 23,718/90-91
3155	**WOERLY, STEPHANE, MD, PhD** **(DUNCAN, RUTH)** ***Biological Sciences, Keele*** Development of polymeric matrices for central nervous system transplantation and controlled drug delivery **1990-91 EP Jun 90–May 91**	$ 45,275/89-90 43,683/90-91
3156	**WOLLENBERG, GORDON K., DVM** **(HAYES, MICHAEL A.)** ***Veterinary Pathology, Guelph*** Studies on tumor necrosis factor-alpha **1990-91 EP Apr 90–Mar 91**	$ 32,915/89-90 36,899/90-91
3157	**WONG, DENNIS A., MD** **(DOLOVICH, JERRY)** **(DENBURG, JUDAH A.)** ***Medicine, McMaster*** The role of cytokines in allergic inflammation **1990-91 EP Jul 90–Mar 91**	$ 31,368/90-91
3158	**WOO, NOBBY D., MD** **(ANDERSON, WILLIAM A.)** **(GANGULY, PALLAB K.)** ***Anatomy, Manitoba*** Peptidergic regulation of sympathetic nerve function in cardiac hypertrophy **1990-91 EP Apr 90–Mar 91**	$ 17,310/89-90 31,234/90-91
3159	**WOODRUFF, WENDY A., PhD** **(OHMAN, DENNIS E.)** ***Microbiology, Tennessee*** Regulation of capsule biosynthesis in Pseudomonas aeruginosa **1990-91 EP Jul 90–Jun 91**	$ 29,113/90-91

N° de liste	Subvention/Bourse	Résumé financier
3160	**WOOLLEY, G. ANDREW, PhD** **(WALLACE, B.A.)** ***Chemistry, Rensselaer Polytechnic Institute (Troy, New York)*** Molecular characterization of ion channel **1990-91 EP Jul 90–Jun 91**	$ 27,310/90-91
3161	**WROBEL-KONRAD, EDYTA M., MD** **(SCHIFFRIN, ERNESTO L.)** ***Institut de recherches cliniques de Montréal*** Function of atrial natriuretic factor and angiotensin II in the brain **1990-91 EP jlt 90–mar 91**	$ 28,548/90-91
3162	**WU, GUOYAO, PhD** **(MARLISS, ERROL B.)** ***Medicine, McGill*** Whole body and specific organ ketone body metabolism in diabetes mellitus and in altered nutritional states **1990-91 EP Apr 90–Mar 91**	$ 18,380/89-90 28,203/90-91
3163	**WU, QI, BM, PhD** **(PHILLIPS, ROBERT A.)** ***Hospital for Sick Children (Toronto)*** Developmentally regulated genes specifically expressed in hematopoietic stem cells **1990-91 EP Jun 90–Mar 91**	$ 35,590/90-91
3164	**XANTHOUDAKIS, STEVEN, PhD** **(CURRAN, TOM)** ***Roche Inst. of Molecular Biology (Nutley, N.J.)*** Molecular basis of transcriptional regulation by protooncogenes **1990-91 EP May 90–Apr 91**	$ 27,155/90-91
3165	**XIANG, JIAN H., MD, PhD** **(HOZUMI, NOBUMICHI)** ***Mount Sinai Hospital (Toronto)*** Genetic engineering of human antibody for cancer therapy **1990-91 EP Apr 90–Jun 90**	$ 38,719/89-90 11,144/90-91
3166	**XIAO, HUA, PhD** **(FRIESEN, JAMES D.)** ***Hospital for Sick Children (Toronto)*** Genetic and molecular studies of RNA polymerases in Saccharomyces cerevisiae **1990-91 EP Jun 90–Mar 91**	$ 24,369/90-91
3167	**YAGER, JEROME Y., MD** **(VANNUCCI, ROBERT C.)** ***Pediatrics, Pennsylvania State*** Pathogenesis of perinatal hypoxic-ischemic brain injury **1990-91 EP Jul 90–Jun 91**	$ 42,644/90-91
3168	**YELLE, JOCELYN, PhD** **(JOLICOEUR, PAUL)** ***Institut de recherches cliniques de Montréal*** Isolement et caractérisation de révertants provenant de cellules transformées par divers oncogènes **1990-91 EP avr 90–jui 90**	$ 28,825/89-90 7,053/90-91

List No.	Grant/Award	Financial History
3169	**YOO, DONGWAN, DVM, PhD** **(BABIUK, LORNE A.)** ***Veterinary Microbiology, Saskatchewan*** Cloning and expression of bovine rotavirus and coronavirus proteins **1990-91 EP Apr 90–Mar 91**	$ 40,296/89-90 42,153/90-91
3170	**YOUNG, L. TREVOR, MD** **(WARSH, JERRY J.)** ***Psychiatry, Toronto*** Preclinical studies of the application of positron emission tomography to examine brain poly-phosphoinositide second messengers **1990-91 EP Apr 90–Mar 91**	$ 29,935/89-90 41,854/90-91
3171	**YUAN, SONGYANG, MD** **(JOTHY, SERGE)** ***Pathology, McGill*** Human colon cancer: the functional role of carcinoembryonic antigen as an adhesion molecule **1990-91 EP Jul 90–Mar 91**	$ 32,309/90-91
3172	**ZACHAREWSKI, TIMOTHY R., PhD** **(CHAMBON, PIERRE)** ***Chimie biologique, Université Louis Pasteur (Strasbourg)*** Characterization of the functional domains of the estrogen receptor **1990-91 EP jlt 90–jui 91**	$ 14,805/89-90 29,512/90-91
3173	**ZHANG, LI, MD, PhD** **(LEVY, GARY A.)** **(MILLER, RICHARD G.)** ***Immunology, Toronto*** Mechanisms of tolerance induction to allogeneic major histocompatibility complex **1990-91 EP Mar 91**	$ 4,746/90-91
3174	**ZHANG, LIANG, MD, PhD** **(CARLEN, PETER L.)** ***Physiology, Toronto*** Modulation of ionic currents by second messengers and drugs **1990-91 EP Apr 90–Mar 91**	$ 32,409/89-90 42,152/90-91
3175	**ZHAO, JIANMIN, PhD** **(BUICK, RONALD N.)** ***Medical Biophysics, Toronto*** Pertussis-toxin sensitive G-protein in signal transduction **1990-91 EP May 90–Mar 91**	$ 26,576/90-91
3176	**ZHENG, YUNLI, BM** **(FROESE, ARNOLD)** ***Immunology, Manitoba*** Establishment and characterization of hybrid mast cells **1990-91 EP Sep 90–Mar 91**	$ 22,493/90-91
3177	**ZIDICHOUSKI, JEFFREY A., PhD** **(JHAMANDAS, JACK H.)** ***Medicine, Alberta*** Electrophysiological characterization of central cardiovascular pathways in the rat **1990-91 EP Jan 91–Mar 91**	$ 7,803/90-91
3178	**ZWIMPFER, THOMAS J., MD** **(AGUAYO, ALBERT J.)** ***Neurology and Neurosurgery, McGill*** Inappropriate synaptogenesis by retinal ganglion cell axons regenerating into the cerebellar cortex of the adult hamster **1990-91 EP Apr 90–Mar 91**	$ 39,017/89-90 42,053/90-91

N° de liste	Subvention/Bourse	Résumé financier

Dental Fellowships/Bourses en recherche dentaire

Total value/valeur totale: $251,650 1990-91.

3179	**CHEN, JIN-KUN, DMD** **(SODEK, JAROSLAV)** ***Dentistry, Toronto*** Role of sialoproteins in bone formation **1990-91 EP Apr 90–Mar 91**	$ 42,153/90-91
3180	**DAO, T.T. THUAN, DMD** **(LUND, JAMES P.)** ***Médecine dentaire, Montréal*** La plaque occlusale comme traitement de la douleur myofasciale trigéminale **1990-91 EP avr 90–mar 91**	$ 37,360/89-90 40,615/90-91
3181	**HERGOTT, GREGORY J., DDS** **(KALNINS, VITAUTS I.)** ***Anatomy, Toronto*** Interaction of retinal pigment epithelial cells with the substratum during wound healing **1990-91 EP Apr 90–Mar 91**	$ 34,993/89-90 39,080/90-91
3182	**LAPOINTE, HENRY J., DDS** **(BANERJEE, DIPONKAR)** ***Pathology, Western Ontario*** Cloning of tumour infiltrating lymphocytes from squamous cell carcinoma **1990-91 EP Apr 90–Mar 91**	$ 40,009/89-90 41,828/90-91
3183	**OAKLEY, CAROL, DDS** **(BRUNETTE, DONALD M.)** ***Dentistry, British Columbia*** In vitro studies on the mechanism of contact guidance **1990-91 EP Apr 90–Mar 91**	$ 32,248/90-91
3184	**PUTNINS, EDWARD E., DMD** **(BOWDEN, GEORGE H.W.)** ***Dentistry, Manitoba*** Cell wall antigens and their recognition by antibodies in human serum and saliva **1990-91 EP Apr 90–Mar 91**	$ 34,594/89-90 38,662/90-91
3185	**RICHMAN, JOY M., DMD** **(TICKLE, CHERYLL)** ***Middlesex Hospital (London, England)*** Cellular mechanisms involved in morphogenesis of the embryonic chick face **1990-91 EP May 90–Jul 90**	$ 40,422/89-90 10,899/90-91
3186	**TAYLOR, LINDA M., DMD** **(HEERSCHE, JOHANNES N.M.)** ***Dentistry, Toronto*** Regulation of osteoclast differentiation in vitro **1990-91 EP Apr 90–May 90**	$ 37,551/89-90 6,165/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

University-Industry Fellowships/Bourses de recherche université-industrie

Total value (MRC only)/valeur totale (CRM seulement): $262,964 1990-91.

3187 **CAMPOS, ROBERT V., PhD** — $ 5,069/90-91
(DRUCKER, DANIEL J.)
Medicine, Toronto
Parathyroid hormone-like protein in neoplastic tumors
1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga
1990-91 EP Oct 90–Mar 91

3188 **CARERE, RONALD G., MD** — $ 10,456/90-91
(LIU, PETER P.)
Medicine, Toronto
In vivo studies of endothelial and smooth muscle repair following angioplasty injury in a pig model
1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga
1990-91 EP Jul 90–Mar 91

3189 **CHIU, EDWARD K.Y., MD** — $ 6,133/89-90, 2,287/90-91
(MCNEILL, J. ROBERT)
Pharmacology, Saskatchewan
Role of vasopressin in hypertension
1990-91 expenditure breakdown: joint award with the Canadian Hypertension Society (Montreal) and Searle Canada Inc.
1990-91 EP Apr 90–Jun 90

3190 **CYR, DANIEL G., PhD** — $ 8,376/89-90, 14,918/90-91
(ROBAIRE, BERNARD)
Pharmacology and Therapeutics, McGill
Intercellular control of 4-ene 5-alpha-reductase
1990-91 expenditure breakdown: joint award with Ciba-Geigy Canada Inc. of Mississauga
1990-91 EP Apr 90–Mar 91

3191 **DULHANTY, ANN M., PhD** — $ 7,624/90-91
(RIORDAN, JOHN R.)
Biochemistry, Toronto
Cystic fibrosis gene product: structure of regulatory domain
1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga
1990-91 EP Jun 90–Mar 91

3192 **FISCHER, DANNY B., MD** — $ 10,143/90-91
(JACOBSON, HARRY R.)
(BADR, KAMAL F.)
Medicine, Vanderbilt
Regulation of arachidonate lipoxygenase activity in the glomerulus
1990-91 expenditure breakdown: joint award with Baxter Corporation (Mississauga) and the Canadian Society of Nephrology (Montreal)
1990-91 EP Jul 90–Mar 91

3193 **FLOWERS, MICHELE A., MD** — $ 11,329/89-90, 14,051/90-91
(INMAN, ROBERT D.)
Medicine, Toronto
In vitro evaluation of immune responses to hepatitis B infection
1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga
1990-91 EP Apr 90–Mar 91

3194 **GRAHAM, ROGER W., PhD** — $ 19,465/90-91
(WARREN, R. ANTONY J.)
(KILBURN, DOUGLAS G.)
Microbiology, British Columbia
To design a novel strategy for expression and purification of medically important recombinant proteins
1990-91 expenditure breakdown: additional support will be provided by Helix Biotech Corporation of Richmond, British Columbia
1990-91 EP Apr 90–Dec 90

3195 **KINGMA, IRIS, MD, PhD** — $ 9,183/89-90, 4,430/90-91
(PAUL, LEENDERT C.)
Medicine, Calgary
Renal function and glomerular hemodynamics in chronically rejecting allografts
1990-91 expenditure breakdown: joint award with the Kidney Foundation of Canada (Montreal)
1990-91 EP Apr 90–Jul 90

3196 **KOSCHINSKY, MARLYS L., PhD** — $ 26,320/89-90, 29,097/90-91
(LAWN, RICHARD M.)
Genentech, Inc. (San Francisco)
Expression and characterization of recombinant apolipoprotein(a) in mammalian cells
1990-91 EP May 90–Apr 91

3197 **KUMAR, RAKESH, PhD** — $ 8,658/90-91
(KNAUS, EDWARD E.)
(WIEBE, LEONARD I.)
Pharmacy and Pharmaceutical Sciences, Alberta
The design and biological evaluation (in vitro and in vivo) of novel 5-substituted pyrimidine nucleoside analogs as antineoplastic and antiviral agents
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Aug 90–Mar 91

3198 **LOUIE, MARIE, MD** — $ 10,770/90-91
(BRUNTON, JAMES L.)
Microbiology, Toronto
Analysis of adhesive effacing colonization of E. coli 0157:H7
1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga
1990-91 EP Jul 90–Mar 91

3199 **MCCORMACK, JAMES P., PharmD** — $ 7,292/89-90, 13,460/90-91
(RANGNO, ROBERT E.)
St. Paul's Hospital (Vancouver)
Trial of oral morphine in the treatment of acute postsurgical pain
1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)
1990-91 EP Apr 90–Mar 91

List No.	Grant/Award	Financial History
3200	**MORITA, TETSUYA, MD** **(VOLPE, ROBERT)** ***Medicine, Toronto*** Immunological aspects of thyroid disease *1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga* **1990-91 EP Jun 90–Mar 91**	$ 12,379/90-91
3201	**PANISSET, MICHEL, MD** **(BOLLER, FRANCOIS)** ***INSERM (Paris)*** Aspects cliniques, neuropsychologiques et neurobiologiques de la maladie d'Alzheimer *1990-91 ventilation des dépenses: programme conjoint de bourse avec la Société Alzheimer du Canada (Toronto) et Price Daxion (Mississauga)* **1990-91 EP oct 90–mar 91**	$ 6,488/90-91
3202	**PARKINSON, FIONA E., PhD** **(FREDHOLM, BERTIL B.)** ***Pharmacology, Karolinska Institutet (Stockholm)*** Functional effects of adenosine transport inhibition in the brain *1990-91 expenditure breakdown: joint award with Ciba-Geigy Canada Ltd. of Mississauga* **1990-91 EP Jun 90–May 91**	$ 11,147/89-90 14,280/90-91
3203	**PREIKSAITIS, HAROLD G., MD, PhD** **(DIAMANT, NICHOLAS E.)** ***Medicine, Toronto*** Calcium transients and oscillatory activity of gastric smooth muscle *1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 9,978/89-90 13,951/90-91
3204	**SCHULZ, RICHARD, PhD** **(MONCADA, SALVADOR)** ***Wellcome Research Laboratories (Beckenham, Eng.)*** Biological relevance of nitric oxide generation by the vascular endothelium **1990-91 EP Jul 90–Mar 91**	$ 28,669/89-90 22,160/90-91
3205	**SUTHERLAND, MAY S., PhD** **(MCLACHLAN, DONALD R.)** ***Physiology, Toronto*** Gene expression of regulatory proteins in Alzheimer's disease *1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 6,626/89-90 9,451/90-91
3206	**WU, DONG-DONG, MD, PhD** **(KEATING, ARMAND)** ***Medicine, Toronto*** Therapeutic gene delivery *1990-91 expenditure breakdown: joint award with I.C.I. Pharma Canada of Mississauga* **1990-91 EP Apr 90–Mar 91**	$ 14,051/90-91
3207	**XU, XIN, PhD** **(LEE, PING I.)** ***Pharmacy, Toronto*** Study on the mechanism of rate-programmed drug release from polymer delivery systems; application of erodible polymers in vivo *1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)* **1990-91 EP Jul 90–Nov 90**	$ 6,316/90-91
3208	**ZHANEL, GEORGE G., PharmD** **(HOBAN, DARYL J.)** ***Medical Microbiology, Manitoba*** Post-antibiotic effect of quinolones and aminoglycosides on aerobic Gram-negative bacilli *1990-91 expenditure breakdown: joint award with the PMAC Health Research Foundation (Ottawa)* **1990-91 EP Apr 90–Mar 91**	$ 9,375/89-90 13,460/90-91

Biotechnology Training Centres/Centres de formation supérieure en biotechnologie

Total value/valeur totale: $128,009 1990-91

3209	**CHAYE, HELENA H.** **(GILLAM, SHIRLEY)** ***Pathology, British Columbia*** Elucidation of epitopes on rubella virus E1 glycoprotein responsible for immune response induction **1990-91 EP Apr 90–Aug 90**	$ 10,748/89-90 6,010/90-91
3210	**CLEGG, NIGEL J.M.** **(GRIGLIATTI, THOMAS A.)** ***Zoology, British Columbia*** Cloning and characterization of genes that suppress position effect variegation in Drosophila melanogaster **1990-91 EP Apr 90–Aug 90**	$ 16,504/89-90 6,010/90-91
3211	**DASTOOR, FARAHAD** **(BEATTY, J. THOMAS)** ***Microbiology, British Columbia*** Studies on citric acid cycle enzymes in Rhodobacter capsulatus, especially their genetic structure and regulation by oxygen **1990-91 EP Apr 90–Aug 90**	$ 10,748/89-90 6,010/90-91
3212	**FRASER, BARBARA M.** **(HOAR, DAVID I.)** ***Medical Biochemistry, Calgary*** Molecular characterization of the mutations responsible for causing hemophilia B in two Calgary patients **1990-91 EP Apr 90–Aug 90**	$ 16,504/89-90 5,892/90-91
3213	**GRANT, CAROLINE E., PhD** **(DEELEY, ROGER G.)** ***Pathology, Queen's*** Development of steroid responsiveness in the liver **1990-91 EP Apr 90–Jun 90**	$ 7,443/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3214	**MORROW, GLENN W.** **(BROWN, JOHN C.)** **(MACGILLIVRAY, ROSS T.A.)** ***Physiology, British Columbia*** The expression of human and porcine gastric intestinal polypeptide using recombinant DNA techniques **1990-91 EP Apr 90–Aug 90**	$ 10,748/89-90 6,010/90-91
3215	**PACHAL, RICHARD G.** **(SPIEGELMAN, GEORGE B.)** ***Microbiology, British Columbia*** The roles of ras and rap proteins in growth and differentiation of Dictyostelium discoideum **1990-91 EP Apr 90–Aug 90**	$ 10,748/89-90 6,010/90-91
3216	**PREDY, D. RANDALL W.** **(MCGHEE, JAMES D.)** ***Medical Biochemistry, Calgary*** Recombinant DNA biotechnology **1990-91 EP Apr 90–Mar 91**	$ 10,159/89-90 17,173/90-91
3217	**PROSSER, DAVID E.** **(WHITE, BRADLEY N.)** ***Biology, Queen's*** Studies on the Bacillus brevis expression system **1990-91 EP Apr 90–Jun 90**	$ 15,371/89-90 3,952/90-91
3218	**SCHRADER, TIMOTHY J., PhD** **(DEELEY, ROGER G.)** ***Biochemistry, Queen's*** Hormonal regulation of the avian apoVLDLII gene **1990-91 EP Apr 90–Jun 90**	$ 29,808/89-90 7,053/90-91
3219	**THAKER, AJAYKUMAR J., PhD** **(MCGHEE, JAMES D.)** ***Medical Biochemistry, Calgary*** Recombinant DNA biotechnology **1990-91 EP Apr 90–Mar 91**	$ 21,456/89-90 35,321/90-91
3220	**VOGEL, LEE B.** **(FUJITA, DONALD J.)** ***Medical Biochemistry, Calgary*** The lck gene: a T-cell specific oncogene related to the src family of tyrosine kinases **1990-91 EP Apr 90–Mar 91**	$ 16,504/89-90 17,173/90-91
3221	**WHITFORD, MARC F.** **(FAULKNER, PETER)** ***Microbiology and Immunology, Queen's*** Identification of genes encoding structural polypeptides on the genome of Autographa californica nuclear polyhedrosis virus **1990-91 EP Apr 90–Jun 90**	$ 16,504/89-90 3,952/90-91

Studentships/Bourses de stagiaire de recherche

Total value/valeur totale: $5,799,354 1990-91.

N° de liste	Subvention/Bourse	Résumé financier
3222	**ADCHARAMOORTHY, YOGARANY** **(BIRNBOIM, HYMAN C.)** ***Microbiology and Immunology, Ottawa*** Identification of naturally occurring labelling points in granulocytes **1990-91 EP Apr 90–Aug 90**	$ 13,837/89-90 7,029/90-91
3223	**ADELSTEIN, ANA** **(CROWNE, DOUGLAS P.)** ***Psychology, Waterloo*** Spatial influences in auditory attentional asymmetries: their effects in learning disabled children diagnosed as attention deficit disordered, and in neurological patients suffering from hemi-neglect **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3224	**ALAIN, CLAUDE** **(RICHER, FRANCOIS)** ***Psychologie, Québec à Montréal*** Localisation des potentiels évoqués endogènes chez l'humain **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3225	**ALLINGHAM-HAWKINS, DIANE J.** **(TOMKINS, DARRELL J.)** ***Pediatrics, McMaster*** Complementation analyses in Robert's syndrome **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3226	**AMMANN, HELENE** **(BOULANGER, YVAN)** **(VINAY, PATRICK)** ***Physiologie, Montréal*** Etudes par résonance magnétique nucléaire des relations entre le métabolisme énergétique et le transport le long du néphron **1990-91 EP avr 90–jlt 90**	$ 14,404/89-90 4,773/90-91
3227	**ANDERSON, MARJORIE C.** **(DOBBS, ALLEN R.)** ***Psychology, Alberta*** Age differences in comprehending medical information **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3228	**ANDREASSEN, MERI L.** **(LEEPER, HERBERT A.)** **(MACRAE, DUNCAN L.)** ***Communicative Disorders, Western Ontario*** Time course of resonance changes following adenoidectomy in normal children **1990-91 EP Apr 90–Aug 90**	$ 13,271/89-90 6,410/90-91
3229	**ARGUIN, MARTIN** **(JOANETTE, YVES)** **(CAVANAGH, PATRICK)** ***Psychologie, Montréal*** Attention et perception visuelle lors de lésions cérébrales chez l'humain **1990-91 EP avr 90–mai 90**	$ 14,404/89-90 2,357/90-91
3230	**ARP, JACQUELINE** **(DEKABAN, GREGORY A.)** ***Microbiology and Immunology, Western Ontario*** Human T-cell lymphotropic virus, type I, envelope protein expression vectors and their role in studying host/viral interations **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91

List No.	Grant/Award	Financial History
3231	**ATTARDO, DIEGO T.** **(HARVEY, STEPHEN)** ***Physiology, Alberta*** Parathyroid hormone regulation of hypothalamic-pituitary function **1990-91 EP Apr 90–Jun 90**	$ 12,749/89-90 3,535/90-91
3232	**ATTIA, JOHN R.** **(DUNN, ROBERT J.)** ***Medical Genetics, Toronto*** Isolation and characterization of the myelin associated glycoprotein receptor **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3233	**AUGUST, SHARON** **(WEISS, PATRICE L.)** ***Physical and Occupational Therapy, McGill*** Using residual upper extremity function as a substitute for fine motor control in physically disabled populations **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3234	**AZZARIA, MARIE** **(MCGHEE, JAMES D.)** ***Medical Biochemistry, Calgary*** Molecular control of gene expression during early development **1990-91 EP Aug 90–Mar 91**	$ 10,300/90-91
3235	**BABINSKI, KAZIMIERZ W.S.** **(DE LEAN, ANDRE)** **(ONG, HUY)** ***Pharmacie, Montréal*** Cellular regulatory mechanisms of the secretion, biosynthesis, processing and action of peptide hormones, in particular natriuretic peptides within adrenal chromaffin cells **1990-91 EP sep 90–mar 91**	$ 5,756/89-90 9,063/90-91
3236	**BAILLY, JANE E.** **(KORNELUK, ROBERT G.)** ***Microbiology and Immunology, Ottawa*** Molecular genetics of the human chromosome 19 region containing the myotonic dystrophy gene **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3237	**BALFOUR, LOUISE C.** **(WHITE, DONNA R.)** ***Psychology, Concordia*** The effects of social support, self-esteem, and psychological stress on diabetic control in insulin-dependent diabetes mellitus adolescents **1990-91 EP Sep 90–Mar 91**	$ 8,444/90-91
3238	**BALLANTINE, ABIGAIL C.** **(SEGALL, JACQUELINE M.)** ***Biochemistry, Toronto*** Cloning and characterization of yeast transcription factor TFIIIB **1990-91 EP Apr 90–Mar 91**	$ 10,416/89-90 15,073/90-91
3239	**BARSKY, VALERIE E.** **(SIEGEL, LINDA S.)** ***Education, Toronto*** Cognitive and social outcomes of Reye's syndrome: children at risk for learning disabilities? **1990-91 EP Apr 90**	$ 13,271/89-90 1,178/90-91
3240	**BASCOM, ROGER A.** **(MCINNES, RODERICK R.)** ***Medical Genetics, Toronto*** Identification of a new mammalian photoreceptor-specific gene family **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3241	**BEAUBIEN, GUY** **(SEIDAH, NABIL G.)** ***Biochimie, Montréal*** Etude structurale du gène de la plasma kallikréine de rat **1990-91 EP avr 90–août 90**	$ 11,572/89-90 6,010/90-91
3242	**BEAUCHEMIN, MICHEL L.J.** **(SAVARD, PIERRE)** ***Médecine, Laval*** Etude de l'expression de gènes homéobox dans les territoires de régénération de la salamandre **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3243	**BEAUDETTE, KATHERINE N.** **(WANG, JERRY H.)** ***Medical Biochemistry, Calgary*** Purification and characterization of a P34CDC2 kinase-like protein from mammalian brain **1990-91 EP Sep 90–Mar 91**	$ 10,158/90-91
3244	**BEAULIEU, CHRISTIAN** **(ALLEN, PETER S.)** ***Applied Sciences in Medicine, Alberta*** Study of transverse and rotating frame relaxation in axonal systems either unmyelinated or myelinated with Schwann cells or oligodendrocytes, and in various types of neuroglial cells **1990-91 EP Sep 90–Mar 91**	$ 9,281/90-91
3245	**BEAULIEU, CHRISTINE** **(GASCON-BARRE, MARIELLE)** ***Pharmacologie, Montréal*** Le statut insulinique en rapport avec l'hypocalcémie et la carence en vitamine D **1990-91 EP avr 90–mar 91**	$ 15,073/90-91
3246	**BEAULIEU, YVES** **(EIKELBOOM, ROELOF)** **(BENINGER, RICHARD J.)** ***Psychology, Queen's*** Activity-induced self-starvation: the role and importance of novelty factors **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3247	**BEAUREGARD, MARIO** **(DESCARRIES, LAURENT)** **(FERRON, ANDRE)** ***Physiologie, Montréal*** Mécanismes dopaminergiques dans le cortex cérébral **1990-91 EP avr 90–août 90**	$ 14,404/89-90 6,010/90-91
3248	**BECHARA, ANTOINE** **(VAN DER KOOY, DEREK J.)** ***Anatomy, Toronto*** Neural processing of incentive versus drive reduction motivation **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3249	**BEDARD, MARC-ANDRE** **(MONTPLAISIR, JACQUES Y.)** **(RICHER, FRANCOIS)** ***Psychologie, Québec à Montréal*** Contribution respective de l'hypoxie cérébrale nocturne et de l'hypersomnie diurne dans les troubles cognitifs des patients avec un syndrome des apnées au cours du sommeil **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3250	**BELLIVEAU, DANIEL J.** **(NAUS, CHRISTIAN C.G.)** ***Anatomy, Western Ontario*** Expression of gap junction genes during prenatal and postnatal development of the rat and mouse central nervous system **1990-91 EP Sep 90–Mar 91**	$ 8,444/90-91
3251	**BELSHAM, DENISE D.** **(WROGEMANN, KLAUS)** ***Human Genetics, Manitoba*** Biochemical and molecular genetic studies in patients with androgen insensitivity syndrome **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3252	**BENDELL, JAMES J.** **(DORRINGTON, JENNIFER H.)** ***Banting and Best Department of Medical Research, Toronto*** The role of transforming growth factor beta in the growth and development of the ovarian follicle **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 12,907/90-91
3253	**BENNETT, STEFFANY A.L.** **(BIRNBOIM, HYMAN C.)** ***Biochemistry, Ottawa*** Activation of oncogenes by granulocyte-generated oxygen radicals **1990-91 EP Apr 90–Mar 91**	$ 9,238/89-90 15,073/90-91
3254	**BERGERON, MARCELLE** **(BUTTERWORTH, ROGER F.)** ***Physiologie, Montréal*** Etude biochimique des systèmes catécholaminergique et sérotoninergique du système nerveux central dans l'encéphalopathie hépatique **1990-91 EP avr 90–mar 91**	$ 15,073/90-91
3255	**BERKELAAR, J.A. MICHELLE** **(BRAY, GARTH M.)** **(AGUAYO, ALBERT J.)** ***Medicine, McGill*** Study of the synapses formed by regenerated and control retinal ganglion cell terminals **1990-91 EP Sep 90–Mar 91**	$ 9,159/90-91
3256	**BERNARD, LYNN E.** **(WOOD, STEPHEN)** ***Medical Genetics, British Columbia*** Isolation of clones from a region of chromosome 5 defined by a chromosomal rearrangement **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

N° de liste	Subvention/Bourse	Résumé financier
3257	**BHATNAGAR, SEEMA** **(MEANEY, MICHAEL J.K.)** ***Psychology, Concordia*** Central control of pituitary-adrenocortical function in the spontaneously hypertensive rat **1990-91 EP May 90–Nov 90**	$ 8,944/90-91
3258	**BIGGAN, SHANNAH L.** **(GRAVES, ROGER)** ***Psychology, Victoria*** Mnemonic impairments in organic and non-organic brain dysfunction **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3259	**BILAN, PHILIP J.** **(KLIP, AMIRA)** ***Biochemistry, Toronto*** Regulation of glucose transport by insulin-like growth factor I in muscle cells in culture **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3260	**BILODEAU, MARTIN** **(GRAVEL, DENIS)** **(ARSENAULT, A. BERTRAND)** ***Réadaptation, Montréal*** Evaluation des caractéristiques musculaires de l'hémiplégique: étude électromyographique **1990-91 EP août 90–mar 91**	$ 10,300/90-91
3261	**BLACK, TIMOTHY S.** **(DEVINE, DANA V.)** ***Biochemistry, British Columbia*** **1990-91 EP Aug 90–Mar 91**	$ 7,330/90-91
3262	**BLANC, ANTONY** **(SONENBERG, NAHUM)** ***Biochemistry, McGill*** Isolation, cloning and study of a new 93kDa cap-binding protein in yeast **1990-91 EP Apr 90–Mar 91**	$ 8,059/89-90 15,073/90-91
3263	**BLOUIN, RICHARD** **(MARCEAU, NORMAND)** ***Médecine, Laval*** Organisation structurale et expression différentielle des cytokératines **1990-91 EP avr 90–jul 90**	$ 14,404/89-90 3,535/90-91
3264	**BLUNT, ROBERT A.** **(BARBEAU, HUGUES)** ***Physical and Occupational Therapy, McGill*** The effects of cyproheptadine on spasticity and locomotor function in spastic paretic patients and its combined effect with clonidine **1990-91 EP Apr 90–Jun 90**	$ 11,005/89-90 3,535/90-91
3265	**BODNAR, ANDREA G.** **(RACHUBINSKI, RICHARD A.)** ***Biochemistry, McMaster*** Characterization of integral membrane proteins of rat liver peroxisomes **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3266	**BODNOFF, SHARI R.** **(MEANEY, MICHAEL J.K.)** ***Psychology, Concordia*** The behavioral effects of long-term corticosterone treatment in middle-aged rats **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,410/90-91

List No.	Grant/Award	Financial History
3267	**BOISSEVAIN, MICHAEL D.** **(MARTIN, ROD A.)** ***Psychology, Western Ontario*** Cognitive factors in primary fibromyalgia syndrome **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3268	**BOISSY, ROBERT J.** **(CANDIDO, E. PETER M.)** ***Biochemistry, British Columbia*** Purification and characterization of a heat shock gene promoter-specific transcription factor from the nematode Caenorhabditis elegans **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3269	**BOLDUC, CHRISTIAN** **(DESLAURIERS, NOELLA)** ***Biochimie, Laval*** Analyse phénotypique et fonctionnelle des lymphocytes T de la muqueuse orale murine à l'état sain ou pathologique (infection et réaction autoimmune) **1990-91 EP avr 90–jui 90**	$ 14,404/89-90 3,535/90-91
3270	**BONVISSUTO, ANNE C.** **(LALA, PEEYUSH K.)** ***Anatomy, Western Ontario*** The expression and functional significance of transforming growth factors at the fetomaternal interface **1990-91 EP Apr 90–Mar 91**	$ 11,572/89-90 15,073/90-91
3271	**BOUCHER, DANNY** **(STANNERS, CLIFFORD P.)** **(FUKS, ABRAHAM)** ***Medicine, McGill*** Isolation and characterization of a new member of the carcinoembryonic antigen family **1990-91 EP Jul 90–Aug 90**	$ 6,745/89-90 2,475/90-91
3272	**BOUCHER, SYLVAIN** **(CAILLE, GILLES)** ***Pharmacologie, Montréal*** Etude pharmacocinétique de plusieurs formulations à libération lente de diltiazem et effet de la nourriture sur les paramètres cinétiques de ces formulations **1990-91 EP jui 90–mar 91**	$ 5,755/89-90 12,127/90-91
3273	**BOUDREAU, NANCY J.** **(RABINOVITCH, MARLENE)** ***Pathology, Toronto*** Mechanism of smooth muscle cell migration **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3274	**BOUTIN, YVAN** **(HEBERT, JACQUES)** ***Microbiologie, Laval*** Rôle des anticorps antiidiotypiques dans la régulation de la réponse immune contre Lol p I (allergène majeur du pollen de l'ivraie) chez la souris **1990-91 EP mai 90–mar 91**	$ 13,894/90-91
3275	**BOYE, SANDRA M.** **(ROMPRE, PIERRE-PAUL)** ***Psychology, Concordia*** Effects of apomorphine on self-stimulation behaviour in animals treated acutely or chronically with typical, atypical neuroleptics or SCH23390 **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3276	**BOYLE, ELEANOR A.** **(CLARK, CAMPBELL M.)** ***Psychiatry, British Columbia*** Psychological changes in multiple sclerosis: correlations with markers of organic disease **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3277	**BRANSON, SUSAN M.** **(CRAIG, KENNETH D.)** ***Psychology, British Columbia*** An evaluation of the effectiveness and source of children's spontaneous strategies for coping with postoperative pain **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3278	**BROCHU, SYLVIE** **(PERREAULT, CLAUDE)** ***Médecine, Montréal*** Mécanismes de la tolérance postgreffe médullaire chez la chimère (B6-LP) **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3279	**BROCKWELL, NEIL T.** **(BENINGER, RICHARD J.)** ***Psychology, Queen's*** The role of adenosine and dopamine receptor subtypes in reward and motor activity **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3280	**BROWN, ARTHUR** **(ROSSANT, JANET)** ***Medical Genetics, Toronto*** Identification and characterization of the mouse dt gene **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3281	**BROWN, ERIN E.** **(FIBIGER, H. CHRISTIAN)** ***Psychiatry, British Columbia*** Dopaminergic correlates of intravenous self-administration of stimulants and opiates **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3282	**BRUNDAGE, KRISTY L.** **(FISHER, JOHN T.)** **(FROESE, ALISON B.)** ***Physiology, Queen's*** Effects of steroids and bronchodilators in bronchopulmonary dysplasia **1990-91 EP Apr 90**	$ 13,837/89-90 589/90-91
3283	**BRYDEN, KATHLEEN E.** **(RENTON, KENNETH W.)** ***Pharmacology, Dalhousie*** Role of interleukin-6 in the inflammatory depression of cytochrome P-450 **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3284	**BURNS, ALAN R.** **(HOGG, JAMES C.)** ***Pathology, British Columbia*** An immunocytochemical study of the dynamic interaction of the neutrophil with the pulmonary microvasculature during an acute inflammatory response **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3285	**BURSHTYN, DEBORAH N.** **(BARBER, BRIAN H.)** ***Immunology, Toronto*** The structural basis of class I major histocompatibility complex gene product function in the mouse **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3286	**BUTLER, MICHELLE P.** **(LANGILLE, B. LOWELL)** ***Pathology, Toronto*** Adaptive responses of arteries to changes in blood flow: changes in arterial wall structure after parturition **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3287	**CAIRNS, SHARON L.** **(PEAR, JOSEPH J.)** ***Psychology, Manitoba*** Computer-aided speech shaping **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3288	**CAMPBELL, A. PATRICIA** **(SYKES, BRIAN D.)** ***Biochemistry, Alberta*** Nuclear magnetic resonance studies of calcium-sensitive protein interactions in the thin filament of muscle **1990-91 EP Apr 90–Dec 90**	$ 14,404/89-90 10,960/90-91
3289	**CAMPBELL, KENNETH J.** **(BJORKLUND, ANDERS)** ***Medical Cell Research, Lund*** Intracerebral transplants of fetal nervous tissue: mechanisms of functional recovery **1990-91 EP Apr 90–Jun 91**	$ 9,238/89-90 12,557/90-91
3290	**CANTIN, BERNARD** **(DESPRES, JEAN-PIERRE)** **(JULIEN, PIERRE)** ***Médecine, Laval*** Fat tissue lipoprotein lipase activity and mass (immunoreactivity) in type I hyperlipoproteinemias **1990-91 EP avr 90–mar 91**	$ 15,073/90-91
3291	**CAPREOL, MARTHA J.** **(ALDEN, LYNN E.)** ***Psychology, British Columbia*** Delineating social phobia **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3292	**CAREY, DAVID P.** **(GOODALE, MELVYN A.)** ***Psychology, Western Ontario*** The neural substrates of visually guided reaching in normal subjects and in patients with damage to the posterior regions of the cerebral hemispheres **1990-91 EP Aug 90–Mar 91**	$ 9,681/90-91
3293	**CARPENITO, CARMINE** **(TAKEI, FUMIO)** ***Medical Genetics, British Columbia*** Further characterization of the binding and functional properties of intracellular adhesion molecule-1 **1990-91 EP Jun 90–Mar 91**	$ 6,155/89-90 12,316/90-91
3294	**CARR, PATRICK A.** **(NAGY, JAMES I.)** ***Physiology, Manitoba*** The neuroanatomy and biochemistry of primary afferent neurons **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 15,073/90-91
3295	**CARSON, JEFFREY J.L.** **(PRATO, FRANK S.)** ***Medical Biophysics, Western Ontario*** The mechanism of interaction between time-varying magnetic fields and biological systems: the role of intracellular free calcium concentration **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3296	**CASEY, JOSEPH R.** **(REITHMEIER, REINHART A.F.)** ***Biochemistry, Toronto*** Conformation of the band 3 protein in reconstituted vesicles **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3297	**CHAN, PETER T.K.** **(HERMO, LOUIS)** ***Anatomy, McGill*** Study of the cytoplasmic droplets in rat epididymal spermatozoa and their potential functional role **1990-91 EP May 90–Aug 90**	$ 5,232/90-91
3298	**CHAPMAN, GWENNETH E.** **(KRONDL, MAGDALENA)** **(MACLEAN, HEATHER M.)** ***Nutritional Sciences, Toronto*** Factors influencing food choices of adolescent women **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3299	**CHARBONNEAU, DANIELLE** **(BENINGER, RICHARD J.)** ***Psychology, Queen's*** Learning in subjects with Parkinson's disease **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3300	**CHARTRAND, PASCAL** **(CEDERGREN, ROBERT J.)** ***Biochimie, Montréal*** Utilisation du ribozyme comme enzyme d'hydrolyse de l'ADN modifié **1990-91 EP jui 90–mar 91**	$ 12,716/90-91
3301	**CHEUNG, ELSIE Y.Y.** **(PAPAGEORGIS, DEMETRI)** ***Psychology, British Columbia*** The assessment of cognitive vulnerability in depression **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91

N° de liste	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
3302	**CHILDS, TIMOTHY J.** **(MAK, ALAN S.-L.)** ***Biochemistry, Queen's*** Thin-filament regulation of smooth muscle contraction **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3303	**CHOW, BILLY K.-C.** **(MACGILLIVRAY, ROSS T.A.)** ***Biochemistry, British Columbia*** Regulation of human prothrombin gene expression **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3304	**CLARKE, IAN D.** **(BACK, DONALD W.)** ***Biochemistry, Queen's*** Regulation of fatty acid synthase gene expression **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3305	**COCKSHUTT, AMANDA M.** **(POSSMAYER, FRED)** ***Biochemistry, Western Ontario*** Characterization of the biophysical activity of surfactant-associated protein A in surface tension reduction and counteraction of blood protein inhibition **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3306	**CONSTABLE, R. TODD** **(HENKELMAN, R. MARK)** ***Medical Biophysics, Toronto*** Reconstruction techniques in magnetic resonance imaging **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3307	**COORSSEN, JENS R.** **(HASLAM, RICHARD J.)** ***Pathology, McMaster*** Factors regulating the secretion of alpha-granule constituents from human platelets **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3308	**COPELAND, KENNETH R.** **(YATSCOFF, RANDALL W.)** ***Biochemistry and Molecular Biology, Manitoba*** The immunosuppressive and nephrotoxic properties of cyclosporine metabolites **1990-91 EP Apr 90–Aug 90**	$ 6,101/90-91
3309	**COTE, HELENE** **(MACGILLIVRAY, ROSS T.A.)** ***Biochemistry, British Columbia*** Development of a mouse model for hemophilia B **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3310	**COTE, JACQUES J.** **(RUIZ-CARRILLO, ADOLFO)** ***Biochimie, Laval*** Caractérisation et mécanisme d'action de l'endonucléase G; clonage du cDNA **1990-91 EP avr 90–mar 91**	$ 11,005/89-90 15,073/90-91

N° de liste	Subvention/Bourse	Résumé financier
3311	**COULOMBE, RAYMOND** **(LAVIOLETTE, MICHEL)** ***Médecine, Laval*** La physiopathologie du poumon du fermier **1990-91 EP sep 90–mar 91**	$ 9,063/90-91
3312	**COX, BRIAN J.** **(ENDLER, NORMAN S.)** ***Psychology, York*** Panic attacks, panic disorder, agoraphobia, social phobia, and the panic-anxiety continuum model: a series of empirical studies **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3313	**CRAIG, WILLIAM H.** **(MAGER, DIXIE L.)** **(LANSDORP, PETER M.)** ***Medical Genetics, British Columbia*** Study of cell surface markers on hemopoietic stem cells **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3314	**CRAWFORD, J. DOUGLAS** **(VILIS, TUTIS)** ***Physiology, Western Ontario*** Three-dimensional analysis of eye movements and the role of the midbrain in the regulation of eye movements **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3315	**CUNNINGHAM, JOHN A.** **(SOBELL, LINDA C.)** **(SOBELL, MARK B.)** ***Psychology, Toronto*** What's in a label? The effects of labels on stigma towards problem populations **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3316	**CURTIS, SUSAN B.** **(BUCHAN, ALISON M.J.)** ***Physiology, British Columbia*** Characterization of an insulin secretory abnormality in the diabetic prone Biobreeding (BB) rat **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3317	**DANDOIS, MAXIME G.** **(MARESCA, ANTONELLA)** ***Biochimie, Laval*** Structural features of interspersed repeated sequences associated with centromeric satellite DNA **1990-91 EP mai 90–aoû 90**	$ 4,449/90-91
3318	**DANIELS, JONATHAN M.** **(MASSEY, THOMAS E.)** ***Pharmacology and Toxicology, Queen's*** Metabolic activation and detoxification of aflatoxin B1 in rabbit lung preparations **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3319	**DARLING, PAULINE B.** **(PENCHARZ, PAUL B.)** **(BALL, RONALD O.)** ***Nutritional Sciences, Toronto*** Threonine and phenylalanine metabolism in low-birth-weight infants **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 15,073/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3320	**DAVIES, MARTIN** **(WOOD, JAMES D.)** ***Biochemistry, Saskatchewan*** Regulation of the GABA neurotransmitter system **1990-91 EP Apr 90–Mar 91**	$ 13,835/90-91
3321	**DAVIS, CLAYTUS A.** **(ROSSANT, JANET)** ***Medical Genetics, Toronto*** Expression of the En-2 gene and protein **1990-91 EP Apr 90–Jul 90**	$ 14,404/89-90 5,391/90-91
3322	**DAY, JAMIE C.** **(FIBIGER, H. CHRISTIAN)** ***Psychiatry, British Columbia*** Cholinergic mechanisms in the frontal cortex and hippocampus **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3323	**DELLING, ULRIKE** **(SONENBERG, NAHUM)** ***Biochemistry, McGill*** The function of tat in regulation of HIV-1 gene expression **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3324	**DEMCZUK, SUZANNE** **(ROULEAU, GUY A.)** **(VEKEMANS, MICHEL J.J.)** ***Biologie, McGill*** Caractérisation moléculaire et génétique du syndrome de DiGeorge **1990-91 EP *fév* 91–*mar* 91**	$ 2,256/90-91
3325	**DEMERS, SYLVIE I.** **(TANGUAY, ROBERT M.)** ***Médecine, Laval*** Tyrosinémie héréditaire type 1: mise au point d'un test de détection des porteurs par analyse génomique et élucidation du(des) défaut(s) moléculaire(s) impliqué(s) **1990-91 EP *avr* 90–*mar* 91**	$ 15,073/90-91
3326	**DESAUTELS, LYNE** **(CHARTRAND, PIERRE)** ***Microbiologie et immunologie, Montréal*** Rôle de la topoisomérase II dans la recombinaison chez les cellules de mammifères **1990-91 EP *avr* 90–*août* 90**	$ 14,404/89-90 6,010/90-91
3327	**DESBARATS, LAURIE A.** **(SIU, CHI-HUNG)** ***Biochemistry, Toronto*** Regulation of expression of gp80, a developmentally regulated cell-adhesion molecule in Dictyostelium discoideum **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3328	**DESCHAMPS, BENOIT J.** **(WONG, NORMAN C.-W.)** ***Medical Biochemistry, Calgary*** Mechanisms of thyroid hormone action **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3329	**DESJARDINS, G. CLARISSA** **(BEAUDET, ALAIN)** ***Anatomy, McGill*** Opioid regulation of LHRL release **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3330	**DESJARDINS, MICHEL** **(BENDAYAN, MOISE)** ***Anatomie, Montréal*** Caractérisation structurale et fonctionnelle des membranes basales diabétiques **1990-91 EP *avr* 90–*mar* 91**	$ 14,404/89-90 15,073/90-91
3331	**DESMARAIS, DANIELLE** **(ROYAL, ANDRE)** ***Médecine, Montréal*** Régulation du gène de la périphérine **1990-91 EP *sep* 90–*mar* 91**	$ 9,063/90-91
3332	**DICKSON, CLAYTON T.** **(BLAND, BRIAN H.)** ***Psychology, Calgary*** Sensory-motor functions of the hippocampal theta systems **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3333	**DION, NATALIE** **(BOILEAU, GUY)** ***Biochimie, Montréal*** Etudes du site actif de l'endopeptidase neutre 24.11 **1990-91 EP *jlt* 90–*mar* 91**	$ 11,538/90-91
3334	**DIONNE, NATALIE D.** **(WATKIN, KENNETH L.)** ***Human Communication Disorders, McGill*** Physiological changes in the larynx during stutterers' fluent and dysfluent speech production **1990-91 EP Oct 90–Mar 91**	$ 7,825/90-91
3335	**DOBROVOLNY, MARY ANNE** **(HASSELL, JOHN A.)** ***Biology, McMaster*** Characterization of the cellular targets of the polyomavirus middle T/pp60 c-src complex **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3336	**DOLL, CHRISTOPHER J.** **(HOCHACHKA, PETER W.)** **(REINER, PETER B.)** ***Zoology, British Columbia*** Comparative study of anoxia tolerance **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3337	**DORSCHEID, DELBERT R.** **(PRICE, GERALD B.)** ***Medicine, McGill*** Cloning and characterization of an A-like antigen-conferring gene element, ala **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3338	**DOUGLAS, JENNIFER R.** **(JORDAN, LARRY M.)** ***Physiology, Manitoba*** Identification of spinal cord interneurons responsible for locomotion **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3339	**DOUVILLE, PHILIPPE J.** **(CARBONETTO, SALVATORE T.)** ***Neurology and Neurosurgery, McGill*** Cellular and molecular studies on laminin receptors in the nervous system **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
3340	**DOYON, JEAN** **(LANDRY, FERNAND)** ***Education physique, Laval*** Utilisation de l'effort physique de type aérobique dans la détection, l'évaluation et le monitoring de l'hypertension systémique **1990-91 EP avr 90–jui 90**	$ 10,348/89-90 4,154/90-91	3349	**DUERDEN, JACQUELINE C.** **(JONES-GOTMAN, MARILYN)** ***Psychology, McGill*** The effect of verbal labels on odor memory in patients with focal cerebral lesions **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3341	**DOYON, LOUISE** **(MONTPLAISIR, SERGE)** **(SEKALY, RAFICK-P.)** ***Microbiologie et immunologie, Montréal*** Etude de la fonction de la molécule CD4 dans la différentiation thymique **1990-91 EP avr 90–mar 91**	$ 12,047/89-90 15,073/90-91	3350	**DUNCAN, PETER I.** **(BELL, JOHN C.)** ***Medicine, Ottawa*** Function of cell adhesion molecules **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3342	**DRAPEAU, CHRISTIAN** **(AVOLI, MASSIMO)** ***Neurologie et neurochirurgie, McGill*** L'acide arachidonique et ses métabolites et l'excitabilité neuronale **1990-91 EP avr 90–mai 90**	$ 14,404/89-90 2,357/90-91	3351	**EDMONDS, CLAIRE V.I.** **(RUSSON, ANNE E.)** ***Psychology, York*** Psychological factors and coping mechanisms as predictors of cancer progression: a randomized trial **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3343	**DREW, MARY L.** **(COSTELLO, CHARLES G.)** ***Psychology, Calgary*** Relationship between negative life events and the onset of depression **1990-91 EP Sep 90–Mar 91**	$ 9,136/90-91	3352	**EDMONDS, DIANE E.** **(HORACEK, B. MILAN)** **(WONG, ALAN Y.K.)** ***Physiology and Biophysics, Dalhousie*** Estimation of epicardial and body surface potentials using a mathematical model of cardiac excitation **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3344	**DRIEDGER, SUSAN M.** **(RUEDY, JOHN)** **(COX, DAVID N.)** ***Psychology, Simon Fraser*** AIDS and nursing: of what importance coping styles and social support networks? **1990-91 EP Apr 90–Mar 91**	$ 13,226/89-90 15,073/90-91	3353	**EDWARDS, MARIE P.** **(SCHILDER, ERNA J.)** ***Nursing, Manitoba*** Barriers to organ donation **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3345	**DRIJBER, F.L.I. PHILIP** **(FINLAY, J. BRYAN)** ***Medical Biophysics, Western Ontario*** Sources of slippage in universal joints of external fixation devices **1990-91 EP Apr 90–Sep 90**	$ 14,404/89-90 7,252/90-91	3354	**ENDICOTT, JANE A.** **(LING, VICTOR)** ***Medical Biophysics, Toronto*** Phosphorylation and ATP binding of P-glycoprotein **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3346	**DUBE, LUC** **(SAUVE, REMY)** ***Physiologie, Montréal*** Caractérisation des canaux ioniques ainsi que des mécanismes de régulation de volume sur le tubule contourné proximal de lapin **1990-91 EP avr 90–aoû 90**	$ 14,404/89-90 6,010/90-91	3355	**ETHIER, CHANTAL** **(GASCON-BARRE, MARIELLE)** ***Pharmacologie, Montréal*** Influence de l'état hormonal en vitamine D3 sur la régénération hépatique chez le rat **1990-91 EP jui 90–mar 91**	$ 12,716/90-91
3347	**DUBIK, DONALD** **(SHIU, ROBERT P.C.)** ***Physiology, Manitoba*** Molecular mechanism of estrogen-regulated c-myc oncogene expression in human breast cancer cells **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91	3356	**ETTENSON, DAVID S.** **(GOTLIEB, AVRUM I.)** ***Pathology, Toronto*** Role of the cytoskeleton in wound repair and reestablishment of the confluent monolayer **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3348	**DUBREUIL, MARTINE D.** **(HISCOTT, JOHN)** ***Microbiology and Immunology, McGill*** Modulation of retrovirus multiplication and immune responsiveness by glucocorticoids **1990-91 EP Apr 90**	$ 12,047/89-90 1,178/90-91	3357	**FALK, BAREKET** **(BAR-OR, ODED)** ***Pediatrics, McMaster*** The effect of male puberty on the thermoregulatory response to exercise in the heat **1990-91 EP Apr 90–Dec 90**	$ 14,404/89-90 11,360/90-91
			3358	**FARINHA, MARK A.** **(KROPINSKI, ANDREW M.)** ***Microbiology and Immunology, Queen's*** Vector development and transcription in Pseudomonas aeruginosa **1990-91 EP May 90–Mar 91**	$ 13,894/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3359	**FEAVER, W. JOHN** **(KORNBERG, ROGER D.)** ***Cell Biology, Stanford*** Purification of yeast RNA polymerase II capable of specific initiation in vitro **1990-91 EP Jun 90–May 91**	$ 14,496/89-90 15,191/90-91
3360	**FEDERICO, PAOLO** **(MACVICAR, BRIAN A.)** ***Medical Physiology, Calgary*** Mechanisms through which epileptiform activity is induced and spread to surrounding tissue in the neocortex **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3361	**FEDERSPPIEL, BARTOLOME S.** **(CLARK-LEWIS, IAN)** ***Biochemistry, British Columbia*** Mechanism of action of granulocyte-macrophage colony stimulating factor and regulation of hemopoiesis **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3362	**FEIFEL, DAVID** **(VACCARINO, FRANCO J.)** ***Psychology, Toronto*** The role of somatotropin system in feeding regulation **1990-91 EP Apr 90–Mar 91**	$ 11,682/89-90 10,231/90-91
3363	**FILIATRAULT, JOHANNE** **(BOURBONNAIS, DANIEL)** ***Physiologie, Montréal*** Evaluation de la coordination motrice du membre inférieur chez l'hémiplégique **1990-91 EP avr 90–mar 91**	$ 14,484/90-91
3364	**FITZPATRICK, DANIAL V.** **(INGLES, C. JAMES)** ***Biochemistry, Toronto*** Mechanisms of transcriptional activation in eukaryotes **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3365	**FLAMAND, J.M. LOUIS** **(MENEZES, JOSE P.C.A.)** ***Microbiologie et immunologie, Montréal*** Immunobiologie de l'interaction du virus humain herpes 6 avec les lymphocytes humains **1990-91 EP mai 90–mar 91**	$ 13,894/90-91
3366	**FLATTERS, MICHELE I.** **(DAWSON, DEAN)** ***Molecular Biology, Tufts*** Identification and characterization of mutants in the distributive pathway of chromosome segregation in yeast **1990-91 EP Jul 90–Jun 91**	$ 15,250/90-91
3367	**FOGAL, DENISE R.** **(VERRIER, MARY C.)** ***Physiology, Toronto*** Characteristic abnormalities in posture and upper limb motor control in patients with hemiplegia **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91

N° de liste	Subvention/Bourse	Résumé financier
3368	**FORTH, ADELLE E.** **(HARE, ROBERT D.)** ***Psychology, British Columbia*** Affective processing in psychopathy **1990-91 EP Apr 90**	$ 14,404/89-90 1,178/90-91
3369	**FORTIN, YVES** **(DRAPEAU, GABRIEL R.)** **(BROUSSEAU, ROLAND)** ***Microbiologie et immunologie, Montréal*** Transformation de Bacillus thuringiensis et création d'un vecteur plasmidique chez cette espèce **1990-91 EP avr 90–mar 91**	$ 7,334/89-90 15,073/90-91
3370	**FOURNIER, LINDA A.** **(BEGIN-HEICK, NICOLE)** ***Biochemistry, Ottawa*** Insulin secretion in the lean and obese (ob/ob) mouse **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3371	**FOURNIER, SYLVIE** **(SARFATI, MARIE)** **(DELESPESSE, GUY J.T.)** ***Médecine, Montréal*** Expression et régulation du CD23 dans la leucémie lymphoide chronique **1990-91 EP mai 90–mar 91**	$ 13,894/90-91
3372	**FRADET, CHRISTIANE** **(WILSON, ALLAN)** ***Psychology, Ottawa*** Preparation of children for painful medical procedures **1990-91 EP Jun 90–Mar 91**	$ 5,756/89-90 12,127/90-91
3373	**FRANCE, CHRISTOPHER** **(DITTO, W. BLAINE, JR.)** ***Psychology, McGill*** Cardiovascular responses to psychological stress and caffeine **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3374	**FRASER, CHERYL M.** **(FREEMAN, RICHARD J.)** ***Psychology, Simon Fraser*** Treatment effects of antidepressants in bulimia nervosa **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3375	**FREDERICKSON, ROBERT M.** **(SONENBERG, NAHUM)** ***Biochemistry, McGill*** The regulation of eucaryotic initiation factor 4E phosphorylation **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3376	**FREESTON, MARK H.** **(LADOUCEUR, ROBERT)** ***Psychologie, Laval*** La pensée obsessionnelle: son traitement et son lien aux croyances de responsabilité **1990-91 EP sep 90–mar 91**	$ 9,063/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier
3377	**FUERST, DARREN R.** **(ROURKE, BYRON P.)** ***Psychology, Windsor*** Characteristics and interrelationships between neuropsychological performance and psychosocial functioning in learning-disabled children **1990-91 EP Apr 90**	$ 14,404/89-90 1,178/90-91	3385	**GARTNER, GLORIA M.** **(TREHUB, SANDRA E.)** ***Psychology, Toronto*** Mother-child interaction in hearing-impaired-child/hearing-mother dyads **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3378	**GAGNON, ANITA J.** **(KRAMER, MICHAEL S.)** **(HOEY, JOHN)** ***Epidemiology and Biostatistics, McGill*** An evaluation of an early postpartum discharge program **1990-91 EP Apr 90–Aug 90**	$ 11,005/89-90 6,110/90-91	3386	**GAUCI, DANIELLE F.** **(RIORDAN, JOHN R.)** ***Biochemistry, Toronto*** Drug-protein interactions in multidrug resistance **1990-91 EP Apr 90**	$ 14,404/89-90 1,178/90-91
3379	**GAGNON, CELINE** **(DI PAOLO, THERESE M.P.L.)** ***Pharmacie, Laval*** Modulation des récepteurs dopaminergiques D-1 et D-2 dans les modèles de la maladie de Parkinson chez le rat et le singe **1990-91 EP avr 90–mar 91**	$ 13,271/89-90 15,073/90-91	3387	**GAUTHIER, ERIC** **(TREMBLAY, ROLAND R.)** **(DUBE, JEAN Y.)** ***Médecine, Laval*** Evaluation des mécanismes d'action des stéroides sur la transcription du gène de la kallikréine prostatique du chien **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3380	**GAGNON, GUY** **(VADEBONCOEUR, CHRISTIAN)** **(FRENETTE, MICHEL)** ***Biochimie, Laval*** Clonage, séquence et caractérisation des gènes codant pour l'enzyme I et HPr du système PTS chez Streptococcus salivarius **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91	3388	**GEERTSEN, SUSANNE** **(QUIK, MARYKA)** ***Pharmacology and Therapeutics, McGill*** Regulation of nicotinic type receptors in neuronal cells in culture **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3381	**GAGNON, NATHALIE** **(ROLA-PLESZCZYNSKI, MAREK)** ***Pédiatrie, Sherbrooke*** Modulation du récepteur CD23 par le PAF-acéther **1990-91 EP avr 90–mar 91**	$ 13,271/89-90 15,073/90-91	3389	**GERSTER, JEAN L.** **(SONENBERG, NAHUM)** ***Biochemistry, McGill*** Gene regulation and expression **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3382	**GAGNON, REMI** **(HEBERT, JACQUES)** ***Médecine, Laval*** Rôle du réseau idiotypique et antiidiotypique dans la synthèse in vitro d'IgG et d'IgE anti-Lol p I **1990-91 EP avr 90–mar 91**	$ 8,648/89-90 15,073/90-91	3390	**GERVAIS, FRANCOIS** **(DRAPEAU, GABRIEL R.)** ***Microbiologie et immunologie, Montréal*** Etude de la régulation de la division cellulaire chez Escherichia coli **1990-91 EP mai 90–mar 91**	$ 13,894/90-91
3383	**GALLOWAY, ANNE M.** **(PATERSON, MALCOLM C.)** ***Genetics, Alberta*** Molecular characterization of photoproduct modification and repair **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91	3391	**GHITESCU, D.D. LUCIAN** **(BENDAYAN, MOISE)** ***Anatomie, Montréal*** Immunocytochemical and biochemical study of transendothelial transport of plasma proteins **1990-91 EP avr 90–mar 91**	$ 9,827/89-90 15,073/90-91
3384	**GARNIER, FRANCE** **(GROS, PHILIPPE)** ***Biochemistry, McGill*** Identification and characterization of cis-acting elements and trans-acting factors responsible for the regulation of expression of the mouse mdr1 gene **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91	3392	**GILLSTROM, BRENDA J.** **(HARE, ROBERT D.)** ***Psychology, British Columbia*** Language dysfunction in psychopaths **1990-91 EP Apr 90–Jul 90**	$ 9,827/89-90 4,773/90-91
			3393	**GINGRAS, FRANCE** **(LABUDA, DAMIAN)** ***Pédiatrie, Montréal*** L'analyse des mutations du locus de la dystrophie **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 1[illegible]91
			3394	**GIRARD, GUYLAINE** **(BUTTERWORTH, ROGER F.)** ***Physiologie, Montréal*** Etude du métabolisme de l'ammoniaque dans l'encéphalopathie hépatique expérimentale **1990-91 EP avr 90–mar 91**	$ 13,271/89-90 15,073/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3395	**GLAVAS, NATALIE A.** **(BRAGG, PHILIP D.)** ***Biochemistry, British Columbia*** The structure of the energy-dependent transhydrogenase: a proton pump **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3396	**GLENN, BRIAN L.** **(VILIS, TUTIS)** **(HORE, JONATHAN)** ***Physiology, Western Ontario*** Study of three-dimensional head movements, their properties and neural control **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3397	**GLOVER, J.N. MARK** **(PULLEYBLANK, DAVID E.)** ***Biochemistry, Toronto*** Protonation-dependent DNA polymorphism **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3398	**GLOVER, JOHN R.** **(RACHUBINSKI, RICHARD A.)** ***Biochemistry, McMaster*** Studies of peroxisomal proteins **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3399	**GOODCHILD, NANCY L.** **(MAGER, DIXIE L.)** ***Medical Genetics, British Columbia*** The role of human endogenous retroviral-like sequences in genetic variability and disease **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3400	**GOPING, ING S.M.** **(SHORE, GORDON C.)** ***Biochemistry, McGill*** Loss of carbamyl phosphate synthetase I gene expression following oncogenic transformation of HEP G2 (human) cells **1990-91 EP Apr 90–Jun 90**	$ 3,535/90-91
3401	**GORSKI, SHARON M.** **(GOODFELLOW, PAUL J.)** ***Medical Genetics, British Columbia*** Molecular basis of the defect underlying an X-linked recessive form of cleft palate **1990-91 EP Aug 90–Mar 91**	$ 9,701/90-91
3402	**GOW, CATHERINE A.** **(STUSS, DONALD T.)** ***Psychology, Ottawa*** An analysis of spatial and temporal context memory in patients with frontal lobe lesions **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3403	**GRAFF, LESLEY A.** **(DYCK, DENNIS G.)** ***Psychology, Manitoba*** Vulnerability to postpartum depression **1990-91 EP Sep 90–Mar 91**	$ 6,934/89-90 9,063/90-91
3404	**GRAHAM, CHARLES H.** **(LALA, PEEYUSH K.)** ***Anatomy, Western Ontario*** Control mechanisms in trophoblast invasion **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3405	**GRAHAM, KAREN A.** **(KOREN, GIDEON)** ***Pharmacology, Toronto*** Biochemical markers of intrauterine exposure to cocaine **1990-91 EP May 90–Aug 90**	$ 5,232/90-91
3406	**GRATTON, SOPHIE** **(SEKALY, RAFICK-P.)** ***Microbiology and Immunology, McGill*** Identification of the binding sites of the major histocompatibility complex class II molecule on the CD4 molecule **1990-91 EP May 90–Mar 91**	$ 13,305/90-91
3407	**GRAY, ANNA** **(JACKSON, DOUGLAS N.)** ***Psychology, Western Ontario*** Multidimensional assessment of coronary-prone behaviour: survey of work styles **1990-91 EP Apr 90**	$ 14,404/89-90 1,178/90-91
3408	**GRAY, DARRIN J.** **(KRAUSE, MARGARIDA O.)** ***Biology, New Brunswick*** Interactions during gene expression of small RNAs (7SK) with oncogenes (c-myc) **1990-91 EP Aug 90–Mar 91**	$ 9,601/90-91
3409	**GREGORY, DAVID M.** **(KAY, MARGARITA)** ***Nursing, Arizona*** Toward an understanding of cancer in the urban Tohono O'odham **1990-91 EP Jul 90–Jun 91**	$ 7,470/89-90 15,250/90-91
3410	**GRENIER, FRANCOIS** **(PAGE, MICHEL)** ***Biochimie, Laval*** Métabolisme de la daunorubicine libre ou conjuguée par des cellules cancéreuses **1990-91 EP avr 90–sep 90**	$ 13,271/89-90 7,248/90-91
3411	**GRETTON, HEATHER M.** **(HARE, ROBERT D.)** ***Psychology, British Columbia*** Monoamine oxidase activity and testosterone levels in psychopathy **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3412	**GRIFFITH, C. MAY** **(WILEY, MICHAEL J.)** ***Anatomy, Toronto*** The role of cell surface glycoconjugates in secondary neurulation **1990-91 EP Apr 90**	$ 14,404/89-90 1,178/90-91
3413	**GRIFONE, ROSARIA** **(REID, DAVID W.)** ***Psychology, York*** Patient-physician interactions: physician responses to patient behaviours **1990-91 EP Apr 90–Mar 91**	$ 8,059/89-90 15,073/90-91
3414	**GRIGORIADIS, SOPHIE** **(FEKKEN, G. CYNTHIA)** ***Psychology, Queen's*** Person reliability of the Minnesota multiphasic personality inventory-II **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91

List No.	Grant/Award	Financial History
3415	**GUAN, ALEX L.** **(MAUK, A. GRANT)** ***Biochemistry, British Columbia*** Coordination chemistry of cytochrome b5 **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3416	**GUAY, JEAN-MARTIN** **(LEVESQUE, ROGER C.)** ***Microbiologie, Laval*** Molecular genetics of the transcribe-spacer-promoter-region from the ribosomal DNA of Toxoplasma gondii **1990-91 EP avr 90–mar 91**	$ 12,705/89-90 15,073/90-91
3417	**GUITE, PIERRE** **(LACHAPELLE, PIERRE)** ***Neurology and Neurosurgery, McGill*** Role of the retinal Muller cell in the OP-b-wave integration **1990-91 EP Apr 90–Mar 91**	$ 10,416/89-90 15,073/90-91
3418	**GUPTA, KALPANA** **(MCBURNEY, MICHAEL W.)** **(GRAY, DOUGLAS A.)** ***Biochemistry, Ottawa*** Developmental regulation of the transgenic mouse strain Mpv 20 **1990-91 EP May 90–Mar 91**	$ 13,305/90-91
3419	**GUREVICH, MARIA** **(DAVIS, CAROLINE)** **(KOHN, PAUL M.)** ***Psychology, York*** The benefits of exercise in reducing menstrual symptomatology **1990-91 EP Apr 90–Mar 91**	$ 6,292/89-90 15,073/90-91
3420	**HADJISTAVROPOULOS, HEATHER D.** **(CRAIG, KENNETH D.)** ***Psychology, British Columbia*** Pain expression in medically congruent and incongruent low back pain patients **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3421	**HAIDL, IAN D.** **(JEFFERIES, WILFRED A.)** ***Microbiology, British Columbia*** Molecular and functional characterization of murine dendritic cells and assessment of their relative accessory role in the immune response **1990-91 EP Apr 90–Mar 91**	$ 8,802/89-90 15,073/90-91
3422	**HAMILTON, KATHERINE S.** **(GRANT, CHRISTOPHER W.M.)** ***Biochemistry, Western Ontario*** The physical biochemistry of membrane interactions: glycosphingolipid nuclear magnetic resonance and liposomal amphotericin B **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3423	**HANSEN, JANICE S.** **(MEICHENBAUM, DONALD)** ***Psychology, Waterloo*** Reasoning about exercise nonadherence **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3424	**HARDEN, PHILIP W.** **(PIHL, ROBERT O.)** ***Psychology, McGill*** Cognitive function and hyperreactivity in a longitudinal sample of aggressive pre-adolescent boys **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3425	**HARFORD, CATHERINE A.** **(SARKAR, BIBUDHENDRA)** ***Biochemistry, Toronto*** Mechanism of cisplatin nephrotoxicity **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3426	**HARPER, MARY ELLEN** **(PATRICK, JOHN)** **(HIMMS-HAGEN, JEAN)** ***Biochemistry, Ottawa*** Mechanisms of altered energy expenditure in obesity and food restriction **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3427	**HARRIS, TAMARA L.** **(BIELAJEW, CATHERINE)** ***Psychology, Ottawa*** A search for functional connectivity of the reward substrate between the lateral preoptic and the ventral tegmental areas **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3428	**HART, STEPHEN D.** **(HARE, ROBERT D.)** ***Psychology, British Columbia*** The diagnosis of psychopathy in female and noncriminal populations **1990-91 EP Apr 90–Jul 90**	$ 14,404/89-90 4,773/90-91
3429	**HAYES, KRISTEN** **(WEAVER, LYNNE C.)** ***Physiology, Western Ontario*** Tonic brainstem influences on sympathetic pathways to the kidney and spleen in rats **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3430	**HEAD, SUSAN C.** **(LINGWOOD, CLIFFORD A.)** **(KARMALI, MOHAMED A.)** ***Microbiology, Toronto*** Studies on structure/function relationships of verocytotoxins **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3431	**HEFFERNAN, MICHAEL L.** **(DENNIS, JAMES W.)** ***Medical Genetics, Toronto*** Cloning cDNAs to rescue the gene defects in glycosylation mutants **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3432	**HEIDBUURT, RUTH G.** **(GREENBERG, CHERYL R.)** ***Human Genetics, Manitoba*** Cloning and sequencing the mutant infantile hypophosphatasia gene, and developing a DNA-based carrier test **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3433	**HEMPHILL, KENNETH J.** **(LEHMAN, DARRIN R.)** ***Psychology, British Columbia*** Perceptions of support attempts: helping patients and families cope with arthritis **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3434	**HEROUX, MARYSE** **(BUTTERWORTH, ROGER F.)** ***Médecine, Montréal*** Les enzymes thiamino-dépendants et le métabolisme de la thiamine dans l'encéphalopathie de Wernicke associée à l'alcoolisme chronique **1990-91 EP avr 90–mar 91**	$ 15,073/90-91
3435	**HIERLIHY, LYNN E.** **(FERGUSON, ALASTAIR V.)** ***Physiology, Queen's*** Mechanisms through which paraventricular nucleus stimulation results in stomach and duodenal ulceration **1990-91 EP Apr 90–Mar 91**	$ 14,484/90-91
3436	**HODGSON, ANTONY J.** **(HOGAN, NEVILLE)** ***Mechanical Engineering, Massachusetts Institute of Technology*** Development of an intelligent mechanical aide for motor training in a manual mode **1990-91 EP Sep 90–May 91**	$ 11,538/90-91
3437	**HOLASH, JOCELYN A.** **(STEWART, PATRICIA A.)** ***Anatomy, Toronto*** Development of the blood-brain barrier **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3438	**HOLITZNER, CHRISTINE A.** **(MORRIS, GERALD P.)** ***Biology, Queen's*** Factors which regulate microvascular responses to gastrointestinal mucosal damage and their possible role in referred protection **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3439	**HOOEY, PATRICK N.** **(SANWAL, BISHNU D.)** **(BALL, ERIC H.)** ***Biochemistry, Western Ontario*** Altered proteolysis of the cAMP dependent protein kinase isozyme in a spontaneously transformed L6 myoblast cell line, JRU5 **1990-91 EP Apr 90**	$ 13,271/89-90 1,178/90-91
3440	**HORLEY, JAMES W.** **(QUINSEY, VERNON L.)** ***Psychology, Queen's*** Social perceptions and cognitions of child sexual abusers **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3441	**HOULE, BENOIT** **(BRADLEY, W. EDWARD C.)** ***Institut du cancer, Hôpital Notre-Dame (Montréal)*** Etude de l'expression de erbA-béta dans les carcinomes pulmonaires humains **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3442	**HSU, SHU-CHAN** **(MOLDAY, ROBERT S.)** ***Biochemistry, British Columbia*** Study of glucose metabolism in retinal photoreceptor rod outer segments **1990-91 EP Apr 90–Mar 91**	$ 12,138/89-90 15,073/90-91
3443	**HSU, YI-TE** **(MOLDAY, ROBERT S.)** ***Biochemistry, British Columbia*** Isolation and characterization of guanylate cyclase **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3444	**HUG, MARTIN B.** **(CIRIELLO, JOHN)** ***Physiology, Western Ontario*** Mediation of vasomotor reflexes by descending projections from A5 cells **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3445	**HUTCHINSON, LLOYD M.** **(JOHNSON, DAVID C.)** ***Pathology, McMaster*** The HSV-1 syn-1 gene: regulation of virus-induced cell fusion **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 15,073/90-91
3446	**HUYER, MARIANNE** **(SMITH, MICHAEL)** ***Biochemistry, British Columbia*** Structure-function studies on recombinant bovine prolactin **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3447	**IGREJA, ISABEL** **(ZUROFF, DAVID C.)** ***Psychology, McGill*** Stressful life events as moderators of dependency and self-criticism in depression and agoraphobia **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3448	**INGENMEY, RITA** **(DUNHAM, PHILIP J.)** ***Psychology, Dalhousie*** The effects of early adult-infant social interactions on infant development **1990-91 EP Apr 90–Mar 91**	$ 10,416/89-90 15,073/90-91
3449	**INGLIS, DEBRA L.** **(FREEMAN, KARL B.)** ***Biochemistry, McMaster*** Structure/function relationships of uncoupling protein **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3450	**JACKSON, SUSAN T.** **(HOLLAND, AUDREY L.)** ***Communication, Pittsburgh*** Comprehension monitoring in aphasia **1990-91 EP Jun 90–Aug 90**	$ 14,496/89-90 3,653/90-91
3451	**JAKOBSON, LORNA S.** **(GOODALE, MELVYN A.)** ***Psychology, Western Ontario*** Mechanisms of visuomotor integration in human prehension **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

List No.	Grant/Award	Financial History
3452	**JAYARAMAN, DEV** **(MUSHYNSKI, WALTER E.)** ***Biochemistry, McGill*** Study of neurofilament subunit expression in rat pheochromocytoma cells **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3453	**JENKINS, MEGAN W.** **(GREENWOOD, CAROL E.)** ***Nutritional Sciences, Toronto*** Changes in cytoskeletal protein synthesis in substantia nigra compacta dopaminergic neurons **1990-91 EP Jun 90–Oct 90**	$ 6,922/90-91
3454	**JIANG, XUNGAO** **(OTTENSMEYER, F. PETER)** ***Medical Biophysics, Toronto*** Optimal design of a magnetic spectrometer for electron microanalysis **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3455	**JOHNSEN, ROBERT C.** **(BAILLIE, DAVID L.)** ***Biological Sciences, Simon Fraser*** Genetic analysis of linkage group V(left) in Caenorhabditis elegans **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3456	**JOHNSON, JOANNE E.** **(CORNELL, ROSEMARY B.)** ***Chemistry, Simon Fraser*** Mechanism of binding of a cytidyltransferase to membranes **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3457	**JOHNSRUDE, INGRID S.** **(MILNER, BRENDA A.)** ***Psychology, McGill*** Effect of left-temporal excisions on speech processing **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3458	**JOLY, ERIK** **(BIBOR-HARDY, VIVIANE)** ***Institut du cancer, Hôpital Notre-Dame (Montréal)*** Caractérisation et rôle biologique de la protéine de 5C8 **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3459	**JONES, ALLEN S.** **(MCCREA, DAVID A.)** ***Physiology, Manitoba*** Stretch evoked monosynaptic Ia EPSPs in motor unit typed cells of the unlesioned and chronic spinal cat **1990-91 EP Apr 90–Dec 90**	$ 11,005/89-90 11,360/90-91
3460	**KARMY, GRIGORY** **(NAGY, JAMES I.)** ***Physiology, Manitoba*** Expression of gap junction proteins in cultures of neurons and astrocytes **1990-91 EP Apr 90–Jul 90**	$ 14,268/89-90 4,773/90-91
3461	**KATSANIS, JOANNA** **(IACONO, WILLIAM G.)** ***Psychology, Minnesota*** Examination of visual evoked responding in first episode psychotic patients and their first-degree relatives **1990-91 EP Aug 90–Apr 91**	$ 11,538/90-91
3462	**KELLER, HEATHER H.** **(FANTUS, I. GEORGE)** ***Dietetics and Human Nutrition, McGill*** Effect of dietary fat composition on insulin sensitivity and glycemic control in non-insulin dependent diabetes **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3463	**KIM, CAIUS** **(OCHI, ATSUO)** ***Immunology, Toronto*** Immune reactions involved in autoimmunity, especially the induction of DNA-reactive B cells **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3464	**KING, KAREN M.** **(CASS, CAROL E.)** ***Biochemistry, Alberta*** Role of membrane permeation in the action of anticancer drugs against normal and neoplastic cells **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 10,123/90-91
3465	**KIRSHENBAUM, LORRIE A.** **(SINGAL, PAWAN K.)** ***Physiology, Manitoba*** Changes in oxygen radical mechanisms in adult rat myocytes in response to hypoxia/reoxygenation in control and hypertrophied hearts **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3466	**KO, W.S. KERRY** **(YOKOYAMA, SHINJI)** ***Medicine, Alberta*** Mechanism of lipid transfer protein reaction **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3467	**KOCH, C. ANNE** **(PAWSON, ANTHONY J.)** ***Medical Genetics, Toronto*** Analysis of SH2, a non-catalytic domain of cytoplasmic protein-tyrosine kinases and a common element in cytoplasmic signaling proteins **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3468	**KOMBIAN, SAMUEL B.** **(COLMERS, WILLIAM F.)** **(REIFFENSTEIN, RHODERIC J.)** ***Pharmacology, Alberta*** Neurological effects of hydrogen sulphide **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3469	**KRAUT, MARTY S.** **(LIGHT, KATHLEEN C.)** ***Psychiatry, North Carolina (Chapel Hill)*** Endorphins and silent ischemia **1990-91 EP May 90–Apr 91**	$ 11,249/89-90 15,411/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3470	**KRUPKA, ANNE** **(MORAN, GREGORY A.)** ***Psychology, Western Ontario*** Study of social development of mothers and infants from a low socio-economic population **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3471	**KRYWIAK, JANIS L.** **(BINIK, IRVING)** ***Psychology, McGill*** The role of psychological response dispositions in breast self-examination behavior **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3472	**KULPA, JANUSZ** **(SADOWSKI, PAUL D.)** ***Medical Genetics, Toronto*** The mechanism of the FLP-mediated recombination reaction **1990-91 EP Apr 90–Aug 90**	$ 13,271/89-90 6,010/90-91
3473	**LABERGE, BENOIT** **(GAUTHIER, JANEL)** ***Psychologie, Laval*** Thérapie cognitivo-comportementale du trouble de panique avec dépression secondaire **1990-91 EP avr 90–jui 90**	$ 14,404/89-90 3,535/90-91
3474	**LABRECQUE, NATHALIE** **(SEKALY, RAFICK-P.)** ***Microbiologie et immunologie, Montréal*** Analyse de l'assemblage du récepteur spécifique des cellules T **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3475	**LACHANCE, DANIELLE** **(GARCIA, RAUL)** ***Médecine, Montréal*** Mechanisms of release of atrial natriuretic factor during acute hemodynamic changes in the rat **1990-91 EP avr 90–oct 90**	$ 14,404/89-90 8,485/90-91
3476	**LADOUCEUR, GINETTE** **(PERETZ, ISABELLE)** **(NESPOULOUS, JEAN-LUC)** ***Psychologie, Montréal*** Mesure directe et indirecte de l'acquisition de prototypes chez des sujets amnésiques **1990-91 EP sep 90–mar 91**	$ 6,345/89-90 8,444/90-91
3477	**LAFONTAINE, MARIELLE** **(MONTPLAISIR, SERGE)** ***Microbiologie et immunologie, Montréal*** Rôles de la cellule dendritique du thymus humain dans la réponse immune **1990-91 EP avr 90–aoû 90**	$ 14,404/89-90 6,629/90-91
3478	**LAKINS, JOHNATHON N.** **(TENNISWOOD, MARTIN P.R.)** ***Biochemistry, Ottawa*** Mechanisms of programmed cell death in the rat androgen-independent prostate cell line RDE **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3479	**LAM, MICHELE Y.C.** **(LAM, JOSEPH S.-L.)** ***Microbiology, Guelph*** A structural and immunochemical examination of the lipopolysaccharide of Pseudomonas aeruginosa **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3480	**LANDOLT, M. CAROLINA** **(REITHMEIER, REINHART A.F.)** ***Biochemistry, Toronto*** Identification and characterization of anion transport proteins in kidney and renal cell lines **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3481	**LANDRY, CLAIRE** **(CRINE, PHILIPPE J.)** ***Biochimie, Montréal*** Etude de l'expression du gène de l'endopeptidase neutre **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3482	**LANEUVILLE, ODETTE** **(PACE-ASCIAK, CECIL R.)** ***Pharmacology, Toronto*** Catabolic pathways and action of hepoxilins and related products in the rat central nervous system **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3483	**LAROSE, LOUISE** **(DE LEAN, ANDRE)** ***Pharmacologie, Montréal*** Mécanismes de régulation des fonctions du récepteur ANF-R1 **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3484	**LAVOIE, JOEL** **(BUTTERWORTH, ROGER F.)** ***Physiologie, Montréal*** Etudes neurochimiques de l'encéphalopathie hépatique **1990-91 EP avr 90–jui 90**	$ 14,404/89-90 3,535/90-91
3485	**LAVOIE, JOSEE** **(LANDRY, JACQUES)** ***Médecine, Laval*** Caractérisation moléculaire et fonctionnelle de la protéine HSP27 de l'hamster **1990-91 EP avr 90–mar 91**	$ 13,271/89-90 15,073/90-91
3486	**LECLERC, DANIEL** **(BRAKIER-GINGRAS, LEA)** ***Biochimie, Montréal*** Introduction de mutations en des sites choisis du RNA ribosomique d'Escherichia coli et étude des conséquences fonctionnelles de ces mutations **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3487	**LECLERC, PIERRE** **(LAMBERT, RAYMOND D.)** ***Obstétrique et gynécologie, Laval*** Etude de la capacitation des spermatozoïdes bovins **1990-91 EP mai 90–déc 90**	$ 10,401/90-91

List No.	Grant/Award	Financial History
3488	**LEDDY, JOHN J.** **(TUANA, BALWANT S.)** ***Pharmacology, Ottawa*** Molecular cloning of cDNA encoding the 60 kDa calmodulin binding polypeptide of skeletal muscle sarcoplasmic reticulum **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3489	**LEE, JONATHAN M.** **(WATTS, TANIA H.)** ***Immunology, Toronto*** Molecular interactions between major histocompatibility complex molecules, antigenic peptides, and T cell receptors **1990-91 EP May 90–Jun 90**	$ 2,757/90-91
3490	**LEE, STEPHEN** **(WANG, Y.-H. EUGENIA)** ***Medicine, McGill*** Programmed control of cell proliferation during aging **1990-91 EP Apr 90–Apr 91**	$ 12,138/89-90 16,251/90-91
3491	**LEE, STUART H.** **(PARANCHYCH, WILLIAM)** ***Biochemistry, Alberta*** Molecular mechanism of FinOP repression **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3492	**LEE, VALENTIA M.W.** **(ARCHER, MICHAEL C.)** ***Medical Biophysics, Toronto*** Determination of the ability of N-nitrosomethylbenzylamine to initiate carcinogenesis in the rat liver **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3493	**LEFEBVRE, DIANA L.** **(ZINGG, HANS H.)** ***Medicine, McGill*** Testicular vasopressin gene expression **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3494	**LEFEBVRE, LOUIS** **(SMITH, MICHAEL)** ***Biochemistry, British Columbia*** Molecular analysis of the SPT2 gene, a negative regulator of delta-mediated gene expression in yeast **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3495	**LEGER, GABRIEL C.** **(GJEDDE, ALBERT H.)** ***Neurology and Neurosurgery, McGill*** Dopa decarboxylase activity in vivo in patients suffering from Parkinson's disease, before and after fetal nigral allotransplantation **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3496	**LEUNG, STEWART S.K.** **(MIYAMOTO, NEIL G.)** ***Medical Biophysics, Toronto*** Transcriptional regulation of the human lymphocyte-specific gene **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3497	**LEVESQUE, DANIEL** **(DI PAOLO, THERESE M.P.L.)** ***Pharmacie, Laval*** Modulation hormonale des récepteurs dopaminergiques au cerveau de rat **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3498	**LI, MADELINE** **(BUICK, RONALD N.)** ***Medical Biophysics, Toronto*** Investigation of tissue-specific gene expression in rat intestine **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3499	**LIEBERMAN, PAMELA B.** **(GREENWOOD, CAROL E.)** ***Nutritional Sciences, Toronto*** The role of dietary 18:2n-6 in mitochondrial cardiolipin fatty acid profiles in the brain and heart **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3500	**LIGHTFOOT, JEFFREY B.** **(LAM, JOSEPH S.-L.)** ***Microbiology, Guelph*** Mutagenesis and molecular cloning of Pseudomonas aeruginosa lipopolysaccharide genes **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3501	**LIPPE, ROGER** **(JEFFERIES, WILFRED A.)** ***Microbiology, British Columbia*** Generation and analysis of mutant antigen presenting cell lines **1990-91 EP Apr 90–Mar 91**	$ 12,520/89-90 15,073/90-91
3502	**LIU, MING-SUN** **(LEE, C.-Y. GREGORY)** ***Obstetrics and Gynecology, British Columbia*** Study of acrosome reaction using monoclonal antibody and evaluation of its corresponding sperm antigen **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3503	**LO, TERENCE P.** **(BRAYER, GARY D.)** ***Biochemistry, British Columbia*** Structural studies of electron transfer in protein complexes involving cytochrome c and cytochrome b5 **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3504	**LOCKWOOD, GEOFFREY R.** **(FOSTER, F. STUART)** ***Medical Biophysics, Toronto*** Development of a very high frequency (50 MHz) catheter-based ultrasound imaging system **1990-91 EP May 90–Mar 91**	$ 13,833/90-91
3505	**LOGAN, C. CAIRINE** **(JOYNER, ALEXANDRA L.)** ***Medical Genetics, Toronto*** Characterization of the 5' regulatory region of the mouse En-2 gene **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3506	**LOISELLE, CARMEN G.** **(DAWSON, CAROLYN)** ***Nursing, Wisconsin*** Restrictive communicative styles: impact on the provision of patient care **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3507	**LONGMAN, R. STEWART** **(INGLIS, JAMES)** ***Psychology, Queen's*** Memory functions in learning-disabled adults **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3508	**LOPATKA, CINDY L.** **(RACHMAN, S. JACK)** ***Psychology, British Columbia*** The role of unexpected events in avoidance behaviour while controlling for intensity of experience **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3509	**LOSIER, BRUNO J.** **(MCGLONE, JEANNETTE M.)** ***Psychology, Dalhousie*** Predictors of memory loss in patients seeking assessment for their memory problems **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3510	**LOUIE, GORDON V.** **(BRAYER, GARY D.)** ***Biochemistry, British Columbia*** Study of the mechanism of the electron transfer reaction mediated by yeast iso-1-cytochromes **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3511	**LOW-NANG, LAWRENCE** **(ROZEN, RIMA)** **(ROSENBLATT, DAVID S.)** ***Biology, McGill*** Molecular characterization of mutations in patients with methylenetetrahydrofolate reductase deficiency **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3512	**LOWICK, BRENDA M.** **(SPREEN, OTFRIED)** ***Psychology, Victoria*** Relationship of early neurological signs to adult outcome in a learning-disabled population **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3513	**LUPIEN, SONIA** **(LECOURS, ANDRE R.)** ***Psychologie, Montréal*** Effet de la nature et de la complexité des taches sur l'asymétrie hémisphérique de l'héminégligence visuelle **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3514	**LUSCHER, MARK A.** **(BARBER, BRIAN H.)** ***Immunology, Toronto*** An investigation of the nature of the cytotoxic T lymphocyte target structure and its creation in vitro and in vivo **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

N° de liste	Subvention/Bourse	Résumé financier
3515	**LUSSIER, FRANCINE** **(LASSONDE, MARYSE)** **(GEOFFROY, GUY)** ***Psychologie, Montréal*** Dysfonctionnement frontal et thérapeutique différentiel chez les Gilles de la Tourette **1990-91 EP avr 90–août 90**	$ 8,059/89-90 6,629/90-91
3516	**LUSSIER, ISABELLE** **(PERETZ, ISABELLE)** ***Psychologie, Montréal*** Caractérisation de la nature de la mémoire implicite **1990-91 EP avr 90–mar 91**	$ 3,935/89-90 15,073/90-91
3517	**MACDONALD, DAWN L.** **(PARANCHYCH, WILLIAM)** ***Biochemistry, Alberta*** Processing and assembly of Pseudomonas aeruginosa pilin **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3518	**MACDONALD, MARY HELEN** **(MCMASTER, W. ROBERT)** ***Medical Genetics, British Columbia*** Expression and processing of the major surface glycoprotein protease of Leishmania **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3519	**MACDONELL, KAREN L.** **(DIAMOND, JACK)** ***Pharmaceutical Sciences, British Columbia*** The role of cAMP-dependent protein kinase in smooth muscle relaxation **1990-91 EP Feb 91–Mar 91**	$ 2,875/90-91
3520	**MACDOUGALL, JOHN R.** **(KERBEL, ROBERT S.)** ***Medical Genetics, Toronto*** Does subversion of the action of growth inhibitory factors contribute to the development of more aggressive cancers? **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3521	**MACKENZIE, KEVIN R.** ***Molecular Biophysics and Biochemistry, Yale*** The creation of chimeric proteins for the study of transmembrane segments in the influenza hemagglutin and the HIV gp41 **1990-91 EP Jun 90–May 91**	$ 14,496/89-90 15,191/90-91
3522	**MACKIE, JANE E.** **(MARKS, GERALD S.)** ***Pharmacology and Toxicology, Queen's*** Determination of levels and half-life of mRNA for delta-aminolevulinic acid synthase after various compounds **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3523	**MACLEOD, ROBERT S.** **(HORACEK, B. MILAN)** ***Physiology and Biophysics, Dalhousie*** Inverse solution of body surface potential maps during percutaneous transluminal coronary angioplasty **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91

List No.	Grant/Award	Financial History
3524	**MADDURI, KRISHNAMURTHY** **(STUTTARD, COLIN)** ***Microbiology, Dalhousie*** Regulation of early steps in beta-lactam biosynthesis, particularly the biosynthesis of alpha-aminoadipate **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3525	**MALETTE, BRIGITTE** **(BLEAU, GILLES)** ***Biochimie, Montréal*** Production d'anticorps polyclonaux contre la partie polypeptidique de l'oviductine et clonage de son gène **1990-91 EP avr 90–mar 91**	$ 12,705/89-90 15,073/90-91
3526	**MARSH, DAVID C.C.** **(BIEGER, DETLEF)** ***Basic Medical Sciences, Memorial University of Newfoundland*** Pharmacology of the rat oesophageal myenteric plexus **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 2,357/90-91
3527	**MARTINOLI, MARIA G.** **(PELLETIER, GEORGES)** ***Physiologie, Laval*** Characterization of the ability of the placenta and the fetus to synthesize growth factors that may influence mammalian somatic growth and hematopoiesis **1990-91 EP avr 90–mar 91**	$ 14,484/90-91
3528	**MATHEW, ANU** **(JOHNSTONE, ROSE M.)** ***Biochemistry, McGill*** The role of clathrin uncoating ATPase in targeting proteins for externalization during red cell maturation **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3529	**MATHIESON, CYNTHIA M.** **(STAM, HENDERIKUS J.)** ***Psychology, Calgary*** Rehabilitation interventions with head and neck cancer patients **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3530	**MATHIEU, JEAN-F.** **(READER, TOMAS A.)** **(DESCARRIES, LAURENT)** ***Physiologie, Montréal*** Néo-différentiation en neurones de cellules médullo-surrénaliennes implantées dans le néostriatum adulte **1990-91 EP mai 90–mar 91**	$ 1,699/89-90 9,981/90-91
3531	**MCBROOM, LINDA D.B.** **(SADOWSKI, PAUL D.)** ***Medical Genetics, Toronto*** Analysis of specific protein-DNA complexes at the Y/Z1 junction of the mating-type locus of Saccharomyces cerevisiae **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3532	**MCCABE, NICOLE** **(LASSONDE, MARYSE)** **(DESMARAIS, GILBERT)** ***Psychologie, Montréal*** Effets de la thérapie électroconvulsive unilatérale non dominante sur la mémoire visuo-spatiale chez les déprimés **1990-91 EP avr 90–mar 91**	$ 11,005/89-90 15,073/90-91
3533	**MCCABE, SCOTT B.** **(GOTLIB, IAN H.)** ***Psychology, Western Ontario*** Clinical depression: identification and examination of predictors of relapse **1990-91 EP Apr 90**	$ 13,271/89-90 1,178/90-91
3534	**MCCARTY, TRACEY S.** **(NEUFELD, R.W. JAMES)** ***Psychology, Western Ontario*** The differential disruptive effects of stress on cognitive efficiency **1990-91 EP Apr 90–Aug 90**	$ 11,005/89-90 6,010/90-91
3535	**MCCOOL, MICHAEL D.** **(STEVENS, JOHN K.)** **(FIUME, EUGENE L.)** ***Biomedical Engineering, Toronto*** Reconstruction, lighting and projection in volume rendering **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3536	**MCDONALD, BERNARD J.** **(BENNETT, BRIAN M.)** ***Pharmacology and Toxicology, Queen's*** Relationship between organic nitrate biotransformation, vasodilation and tolerance **1990-91 EP Apr 90–Mar 91**	$ 14,339/90-91
3537	**MCFARLANE, SARAH** **(COOPER, ELLIS J.)** ***Physiology, McGill*** Factors effecting the expression of voltage-gated K currents **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3538	**MCFETRIDGE, JUDITH A.** **(DAVIDSON, NITA W.)** ***Nursing, Florida*** Physiological correlates of uncertainty and stress in persons hospitalized with ischemic heart disease **1990-91 EP May 90–Apr 91**	$ 14,472/89-90 15,162/90-91
3539	**MCKEE, ANDREW H.Z.** **(KLECKNER, NANCY E.)** ***Biochemistry and Molecular Biology, Harvard*** Genes involved in the chromosome metabolism of meiosis I in yeast **1990-91 EP Jul 90–Jun 91**	$ 14,540/89-90 15,250/90-91
3540	**MCKIM, KIM S.** **(ROSE, ANN M.)** ***Medical Genetics, British Columbia*** Organization of chromosome I genes in Caenorhabditis elegans **1990-91 EP Apr 90–Dec 90**	$ 14,404/89-90 11,360/90-91

N° de liste	Subvention/Bourse	Résumé financier

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3541	**MCLORIE, WHYNN** **(BRANTON, PHILIP E.)** ***Pathology, McMaster*** Functional analysis of one of the human adenovirus type 5 oncogene products (176R) **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3542	**MCMASTER, CHRISTOPHER R.** **(CHOY, PATRICK C.)** ***Biochemistry and Molecular Biology, Manitoba*** The metabolism of choline and ethanolamine plasmalogens **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3543	**MERCURE, STEPHANE** **(MONTPLAISIR, SERGE)** ***Microbiologie et immunologie, Montréal*** Identification des protéines d'adhérence de Candida albicans **1990-91 EP fév 90–mar 91**	$ 12,047/89-90 17,429/90-91
3544	**MERZ, DAVID C.** **(DRAPEAU, PIERRE)** ***Biology, McGill*** Neuronal recognition between identified leech neurons in culture **1990-91 EP Apr 90–Mar 91**	$ 9,827/89-90 15,073/90-91
3545	**MILLAR, DOUGLAS G.** **(SHORE, GORDON C.)** ***Biochemistry, McGill*** Protein targeting to mitochondria: role of cytosolic import factors **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3546	**MILLEN, KATHLEEN J.** **(JOYNER, ALEXANDRA L.)** ***Medical Genetics, Toronto*** The production of subtle gene mutations via homologous recombination in mouse ES cells **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3547	**MILLER, DIANE L.** **(GOODFELLOW, PAUL J.)** ***Medical Genetics, British Columbia*** Cloning expressed sequences from the pericentric region of human chromosome 10 by Alu and L1 repeat element mediated polymerase chain reaction **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3548	**MILLS, REBECCA M.I.** **(HARE, ROBERT D.)** ***Psychology, British Columbia*** Study of psychophysiological activity during a cognitive task (mental rotation) in individuals at risk for alcoholism, and of possible neurophysiological and neurocognitive processes connecting the two clinical disorders, alcoholism and psychopathy **1990-91 EP Apr 90–Mar 91**	$ 8,813/89-90 15,073/90-91
3549	**MOASE, CONNIE E.** **(TRASLER, DAPHNE G.)** ***Biology, McGill*** The study of aberrant neural crest cell migration in mouse neural tube defect mutants **1990-91 EP Apr 90–Dec 90**	$ 14,404/89-90 10,960/90-91
3550	**MOGHAL, NADEEM** ***Microbiology and Molecular Genetics, Harvard*** Expression of oncogenes in transgenic mice; mechanisms of growth control in mammalian cells **1990-91 EP Jun 90–May 91**	$ 11,005/89-90 15,191/90-91
3551	**MONGRAIN, MYRIAM** **(ZUROFF, DAVID C.)** ***Psychology, McGill*** Tryptophan depletion and information processing in dependent and self-critical subjects **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3552	**MONTBRIAND, MURIEL J.** **(KEEGAN, DAVID L.)** **(D'ARCY, K. CARL R.)** ***Psychiatry, Saskatchewan*** Health and illness decision-making practices of patients diagnosed with cancer or possible cancer conditions **1990-91 EP Sep 90–Mar 91**	$ 8,444/90-91
3553	**MOORE, J. TERRY** **(CLARKE, MICHAEL W.)** ***Microbiology and Immunology, Western Ontario*** Expression and characterization of trypanosome variant surface glycoproteins in Chinese hamster ovary cells **1990-91 EP Apr 90–Dec 90**	$ 11,360/90-91
3554	**MOORE, W. ALLAN D.** **(STAMBROOK, MICHAEL)** **(MARTIN, DAVID G.)** ***Psychology, Manitoba*** Belief structure and coping styles following closed head injury: relationship to injury severity and psychosocial outcome **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3555	**MORASH, BARBARA A.** **(GUERNSEY, DUANE L.)** ***Physiology and Biophysics, Dalhousie*** Regulation of the erbA oncogenes encoding thyroid hormone receptor proteins **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3556	**MOREAU, PIERRE** **(DE CHAMPLAIN, JACQUES)** **(YAMAGUCHI, NOBUHARU)** ***Pharmacie, Montréal*** Modulation du tonus et de la réactivité du système sympatho-surrénalien par les neuropeptides chez les rats éveillés normotendus et hypertendus **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3557	**MORISSETTE, NATHALIE** **(CARBONETTO, SALVATORE T.)** ***Neurology and Neurosurgery, McGill*** Molecular basis of the developmental changes in embryonic chick retinal neutrite outgrowth on laminin **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91

N° de liste	Subvention/Bourse	Résumé financier

List No.	Grant/Award	Financial History
3558	**MORROW, GLENN W.** **(MACGILLIVRAY, ROSS T.A.)** **(BROWN, JOHN C.)** ***Physiology, British Columbia*** Preparation and biological activity of human gastric inhibitory polypeptide and mutants **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3559	**MOYER, ANNE E.** **(RODIN, JUDITH)** ***Psychology, Yale*** Health psychology (determinants of health-promoting and health-damaging behaviour) **1990-91 EP Sep 90–May 91**	$ 11,538/90-91
3560	**MUELLER, SUSAN G.** **(KUDLOW, JEFFREY E.)** ***Clinical Biochemistry, Toronto*** Regulation of transforming growth factor-alpha production **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3561	**MUI, ALICE L.-F.** **(KRYSTAL, GERALD)** ***Pathology, British Columbia*** Purification and characterization of the murine interleukin-3 receptor **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3562	**MULLINGTON, JANET M.** **(BROUGHTON, ROGER J.)** ***Psychology, Ottawa*** The therapeutic use of naps in narcolepsy **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3563	**MUMBY, DAVID G.** **(PINEL, JOHN P.J.)** ***Psychology, British Columbia*** Neural bases of amnesia **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3564	**MUNZER, J. SCOTT** **(BLOSTEIN, RHODA)** ***Medicine, McGill*** The role of the membrane environment in modulating Na,K-ATPase behaviour **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3565	**MURPHY, MICHAEL E.P.** **(BRAYER, GARY D.)** ***Biochemistry, British Columbia*** Protein folding and stability of cytochrome c **1990-91 EP Apr 90–Mar 91**	$ 12,138/89-90 15,073/90-91
3566	**NACHTIGAL, MARK W.** **(CATTINI, PETER A.)** ***Physiology, Manitoba*** Regulation and expression of the human growth hormone gene family: the human chorionic somatomammotropin-like gene **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3567	**NAULT, CHANTAL** **(BOURGAUX, PIERRE J.A.)** ***Microbiologie, Sherbrooke*** Etude de la recombinaison intramoléculaire chez un réplicon hybride polyome-souris **1990-91 EP avr 90–mar 91**	$ 12,138/89-90 15,073/90-91
3568	**NEMETH, SUSAN H.** **(WATERS, GLORIA S.)** ***Human Communication Disorders, McGill*** Reading ability of hearing impaired children: role of working memory, phonological recoding and spelling ability **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3569	**NERON, SONIA** **(LEMIEUX, REAL)** ***Microbiologie, Laval*** Contrôle de la réponse immunitaire aux antigènes de groupes sanguins A et B **1990-91 EP sep 90–mar 91**	$ 9,063/90-91
3570	**NEWNHAM, PETER J.** **(TAYLOR, DIANE E.)** ***Medical Microbiology and Infectious Diseases, Alberta*** Study of incompatibility determinants of R27 **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3571	**NG, KENNETH K.S.** **(GARBER, ANTHONY T.)** ***Medical Biochemistry, Calgary*** Molecular phenotyping of psoriatic skin cells **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3572	**NGUYEN, QUANG** **(ROUGHLEY, PETER J.)** **(MORT, JOHN S.)** ***Surgery, McGill*** Characterization of proteolytic agents responsible for proteoglycan degradation during cartilage degeneration in aging and arthritis **1990-91 EP Apr 90–Oct 90**	$ 14,404/89-90 8,885/90-91
3573	**NGUYEN, THUY H.** **(WILLIAMS, DAVID B.)** ***Biochemistry, Toronto*** Characterization of hsp70 binding protein in Saccharomyces cerevisiae **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3574	**NOEL, JOSETTE** **(VINAY, PATRICK)** ***Physiologie, Montréal*** Régulation de l'activité H+-ATPase dans différents segments du néphron **1990-91 EP avr 90–août 90**	$ 14,404/89-90 6,629/90-91
3575	**NOURAINI, SHAHRZAD** **(FRIESEN, JAMES D.)** ***Medical Genetics, Toronto*** Role of RPO26 protein in the function of RNA polymerase II **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3576	**O'BRIEN, TERESA B.** **(DELONGIS, ANITA M.)** ***Psychology, British Columbia*** Family caregiving for chronically ill patients **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 15,073/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3577	**O'CONNOR, TRACY J.** **(FUJITA, DONALD J.)** ***Medical Biochemistry, Calgary*** The role of the c-src protooncogene product in normal melanocytes and malignant melanoma cells **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3578	**ONG, CHRISTOPHER J.** **(MARTH, JAMEY D.)** ***Medical Genetics, British Columbia*** The in vivo and in vitro roles of the lymphoid-specific lck protooncogene **1990-91 EP Aug 90–Mar 91**	$ 10,300/90-91
3579	**OTIS, MARIE-FRANCE** **(C.-GAUDREAULT, RENE)** ***Pharmacologie, Laval*** Synthèse et évaluation de pro-drogues d'anti-inflammatoires activées par les leucocytes **1990-91 EP avr 90–mar 91**	$ 3,346/89-90 15,073/90-91
3580	**OZOLS, DINA Y.** **(ROSENTHAL, KENNETH L.)** **(HARNISH, DELSWORTH G.)** ***Biology, McMaster*** Generation of primary and secondary cytotoxic T lymphocyte responses to Pichinde virus in mice **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3581	**PADUA, RODOLFO A.** **(NAGY, JAMES I.)** **(GEIGER, JONATHAN D.)** ***Physiology, Manitoba*** Neuromodulatory actions of adenosine in the central nervous system **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3582	**PAETSCH, PAUL R.** **(GREENSHAW, ANDREW J.)** **(BAKER, GLEN B.)** ***Psychiatry, Alberta*** Possible role of 2-phenylethylamine in the therapy of affective disorders **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3583	**PAHAPILL, PETER A.** **(SCHLICHTER, LYANNE C.)** ***Physiology, Toronto*** The role of ion channels in human T lymphocyte function **1990-91 EP Apr 90–Sep 90**	$ 14,404/89-90 7,648/90-91
3584	**PALYLYK, EUGENIA L.** **(JAMALI, FAKHREDDIN)** ***Pharmacy and Pharmaceutical Sciences, Alberta*** Pharmacokinetics of nonsteroidal anti-inflammatory drugs **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3585	**PAQUETTE, BENOIT** **(VAN LIER, JOHANNES E.)** ***Médecine nucléaire et radiobiologie, Sherbrooke*** Complexe anticorps monoclonal-phthalocyanine: évaluation comme agent anticancéreux en immunophotothérapie **1990-91 EP avr 90–août 90**	$ 14,404/89-90 6,010/90-91
3586	**PARE, MARTIN** **(GUITTON, DANIEL)** ***Neurologie et neurochirurgie, McGill*** Rôle des "omnidirectional pause neurons" dans le contrôle du regard **1990-91 EP avr 90–mar 91**	$ 13,271/89-90 15,073/90-91
3587	**PARKER, SANDRA E.** **(DELONGIS, ANITA M.)** ***Psychology, British Columbia*** Family caregiving for Alzheimer's patients: coping with burden **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3588	**PASTERNAK, STEPHEN H.** **(HASTINGS, KENNETH E.M.)** **(CASHMAN, NEIL R.)** ***Neurology and Neurosurgery, McGill*** Identification of motor neuron specific genes and characterization of their expression and function **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3589	**PELLETIER, ALEX** **(ROY, PAUL H.)** ***Biochimie, Laval*** Analyse des intégrases de Tn7 et de Tn21 **1990-91 EP avr 90–jul 90**	$ 14,404/89-90 3,535/90-91
3590	**PERROT, STEPHEN B.** **(MOSKOWITZ, DEBBIE S.)** ***Psychology, McGill*** Predictors of recovery of function in childhood brain injury **1990-91 EP Apr 90–May 90**	$ 14,404/89-90 2,357/90-91
3591	**PETERS, KENNETH W.** **(ROSE, ANN M.)** ***Medical Genetics, British Columbia*** Genetic and molecular analysis of the bli-4 locus of Caenorhabditis elegans **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3592	**PHILLIPS, SUSANA M.** **(SHERWIN, BARBARA B.)** ***Psychology, McGill*** Effects of estrogen on mood and memory in women **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3593	**PHIPPS, DAVID J.** **(ASTON, W. PETER)** ***Microbiology and Immunology, Queen's*** The mechanism of action of the Galleria mellonella hemolysin and its role in the protective immune response of the insect **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3594	**PICARD, LYNE** **(ESCHER, EMANUEL)** ***Pharmacologie, Sherbrooke*** Evaluation et toxicologie des lanthanides supérieurs comme agents de radio-contraste dans la lithiase urinaire **1990-91 EP avr 90–oct 90**	$ 8,390/90-91

List No.	Grant/Award	Financial History
3595	**PICARD, NATHALIE** **(SMITH, ALLAN M.)** ***Physiologie, Montréal*** L'activité des neurones du cortex moteur et du cortex somatosensoriel pendant la préhension d'objets de différents poids et textures **1990-91 EP jan 91–mar 91**	$ 4,113/90-91
3596	**PICKERING, DARRYL S.** **(NILES, LENNARD P.)** ***Biomedical Sciences, McMaster*** Characterization of the melatonin receptor and its signal transduction mechanism **1990-91 EP Apr 90–Nov 90**	$ 13,837/89-90 10,741/90-91
3597	**PIERS, KEVIN L.** **(HANCOCK, ROBERT E.W.)** ***Microbiology, British Columbia*** The interaction of human neutrophil peptide I with Pseudomonas aeruginosa **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3598	**PIGGINS, HUGH D.** **(MERALI, ZULFIQUAR)** ***Psychology, Ottawa*** Behavioural response to both subcutaneously and centrally applied bombesin in rats; long-term physiological and behavioural consequences of manipulation of the endogenous bombesin system in the developing rat **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3599	**PIQUETTE-MILLER, MICHELINE R.** **(JAMALI, FAKHREDDIN)** ***Pharmacy and Pharmaceutical Sciences, Alberta*** Pharmacokinetics of enantiomers of drugs in altered pathophysiological states **1990-91 EP Aug 90–Mar 91**	$ 10,300/90-91
3600	**PLANTE, JULIE** **(COTE, SERGE)** ***Médecine, Laval*** Production d'anticorps contre une protéine requise pour l'organisation des fibres nerveuses en fascicules chez Drosophila melanogaster **1990-91 EP mai 90–mar 91**	$ 13,894/90-91
3601	**POLLOCK, ROBIN** **(SHERWIN, BARBARA B.)** ***Psychology, McGill*** The influence of steroid hormones on 3H-imipramine binding in depressed women **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3602	**POLYAK, STEPHEN J.** **(HARNISH, DELSWORTH G.)** ***Pathology, McMaster*** Analysis of Pichinde virus infection of human monocytes and monocytic cell lines **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3603	**POTTER, SUSAN M.** **(DOUGLAS, VIRGINIA I.)** ***Psychology, McGill*** Reinforcement, inhibitory control and autonomic reactivity in attention deficit-hyperactivity disorder and risk for alcoholism **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3604	**POULIN, DANIEL** **(LEDOUX, MARIELLE)** ***Nutrition, Montréal*** L'effet de l'intensité et de la qualité de l'exercice sur le maintien des qualités osseuses chez les rates adultes **1990-91 EP sep 90–mar 91**	$ 9,063/90-91
3605	**POULIOT, JEAN-FRANCOIS** **(BELIVEAU, RICHARD)** ***Physiologie, Montréal*** Etude moléculaire de la réabsorption rénale dans le syndrome de Fanconi expérimental **1990-91 EP avr 90–mar 91**	$ 12,138/89-90 15,073/90-91
3606	**PROULX, CHANTAL** **(BRODEUR, BERNARD R.)** ***Microbiologie et immunologie, Montréal*** Les anti-idiotypes contre une infection à Haemophilus influenzae de type b **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3607	**PROVOST, PATRICK** **(LATOUR, JEAN-GILLES)** ***Pathologie, Montréal*** Protection myocardique durant l'ishcémie et la reperfusion par un antagoniste du calcium **1990-91 EP avr 90–mar 91**	$ 13,271/89-90 15,073/90-91
3608	**PROVOST, SYLVIE** **(CHARTRAND, PIERRE)** ***Microbiologie et immunologie, Montréal*** Caractérisation moléculaire du groupe sanguin rhésus **1990-91 EP avr 90–déc 90**	$ 14,404/89-90 11,360/90-91
3609	**PUTMAN, CHARLES T.** **(HEIGENHAUSER, GEORGE J.F.)** **(JONES, NORMAN L.)** ***Medicine, McMaster*** The sensitivity of muscle pyruvate dehydrogenase to alterations in hydrogen ion concentration during exercise **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 15,073/90-91
3610	**QUACKENBUSH, SUSIE J.** **(ANDREW, R. DAVID)** ***Anatomy, Queen's*** Seizure susceptibility and the osmotic state **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3611	**QUENNEVILLE, LOUISE A.M.** **(WOLLIN, ARMIN)** ***Physiology, Saskatchewan*** Histamine action in chylomicron transport during fat absorption **1990-91 EP Apr 90–Jun 90**	$ 13,271/89-90 3,535/90-91
3612	**RACHER, KATHLEEN I.** **(BORGFORD, THOR J.)** ***Chemistry, Simon Fraser*** A study of the fidelity of protein biosynthesis **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3613	**RAFFERTY, STEVEN P.** **(MAUK, A. GRANT)** ***Biochemistry, British Columbia*** Mechanistic studies of cytochrome c mutants **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3614	**RAYMOND, MARTINE** **(GROS, PHILIPPE)** ***Biochemistry, McGill*** Functional analysis of the multidrug resistance mdr1 gene 5' regulatory cis-acting sequences **1990-91 EP Apr 90–Sep 90**	$ 14,404/89-90 7,248/90-91
3615	**RAYMOND, PHILIPPE** **(ADAM, ALBERT)** **(MORAIS, REJEAN)** ***Pharmacie, Montréal*** Etude du rôle de divers médicaments sur l'expression des protéines de la phase aigue de l'inflammation par les hépatocytes en cultures **1990-91 EP avr 90–mar 91**	$ 8,648/89-90 15,073/90-91
3616	**REID, BRIAN K.** **(FENSTER, AARON)** **(CUNNINGHAM, IAN A.)** ***Medical Biophysics, Western Ontario*** Development of a "table-top" scanner to produce ultra-high resolution computed tomography images of small research animals and pathology specimens **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3617	**REYNOLDS, CATHERINE A.** **(SCHIMMEL, PAUL)** ***Biology, Massachusetts Institute of Technology*** LEU3: a yeast transcriptional activator protein **1990-91 EP Jul 90–Mar 91**	$ 17,939/89-90 11,137/90-91
3618	**RICHARD, MANON** **(CHARTRAND, PIERRE)** ***Microbiologie et immunologie, Montréal*** La recombinaison homologue chez les séquences Lines-1 chromosomiques **1990-91 EP avr 90–mar 91**	$ 13,271/89-90 15,073/90-91
3619	**RICHARD, STEPHANE** **(ZINGG, HANS H.)** ***Medicine, McGill*** Steroid regulation of the oxytocin and vasopressin genes **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3620	**RIDDICK, DAVID S.** **(MARKS, GERALD S.)** ***Pharmacology and Toxicology, Queen's*** Effects of a series of 4-alkyl analogues of 3,5-diethoxycarbonyl-1,4-dihydro-2,4,6-trimethylpyridine on the major inducible cytochrome P-450 isozymes **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3621	**ROBICHAUD, ANNETTE** **(DU SOUICH, PATRICK P.)** **(MICHOUD, MARIE-CLAIRE)** ***Pharmacologie, Montréal*** Le facteur natriurétique de l'oreillette et son rôle au niveau du poumon **1990-91 EP avr 90–mar 91**	$ 8,648/89-90 15,073/90-91
3622	**ROBINSON, DAVID B.** **(SHIU, ROBERT P.C.)** ***Physiology, Manitoba*** Mechanism of prolactin action on the prolactin-inducible protein **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91

N° de liste	Subvention/Bourse	Résumé financier
3623	**RONDEAU, JEAN-JACQUES** **(DE LEAN, ANDRE)** **(ONG, HUY)** ***Pharmacie, Montréal*** Topographie du récepteur R1 du facteur natriurétique de l'oreillette **1990-91 EP avr 90–sep 90**	$ 14,404/89-90 7,248/90-91
3624	**ROSS, DANIELLE S.** **(WATERS, GLORIA S.)** ***Human Communication Disorders, McGill*** Study of how deaf children relate written language to the language they communicate with orally or manually **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3625	**ROULEAU, MICHELE** **(MACKIE, GEORGE A.)** **(BANCROFT, JOHN B.)** ***Biochemistry, Western Ontario*** Replication of potexviruses: identification of the replicase initiation sequences in foxtail mosaic virus **1990-91 EP Apr 90–Mar 91**	$ 3,346/89-90 15,073/90-91
3626	**ROWLEY, ADELE** **(JOHNSTON, GERALD C.)** ***Microbiology, Dalhousie*** Molecular characterization of the yeast CDC68 gene **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3627	**ROZAKIS, MARIA** **(KELLY, PAUL A.)** ***Medicine, McGill*** Molecular analysis of the extracellular ligand binding domain of the prolactin receptor **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3628	**RUZICKA, BIANCA B.** **(JHAMANDAS, KHEM H.)** ***Pharmacology and Toxicology, Queen's*** The interaction of opioids with neurotransmitter systems in rat basal ganglia **1990-91 EP Apr 90–Jun 91**	$ 14,404/89-90 13,052/90-91
3629	**RYAN, AIMEE K.** **(DEELEY, ROGER G.)** ***Biochemistry, Queen's*** Protein interactions with the 5' flanking region of the avian apoVLDII gene **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3630	**RYAN, COLLEEN** **(RADZIUK, JERRY M.)** ***Biochemistry, Ottawa*** The glyconeogenic repletion of glycogen following exercise in rats **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3631	**RYAN, PAULA P.** **(BOWIE, WILLIAM R.)** ***Medicine, British Columbia*** Characterization of Giardia antigens recognized by anti-Giardia antibodies **1990-91 EP Apr 90–Aug 90**	$ 13,271/89-90 6,410/90-91

List No.	Grant/Award	Financial History
3632	**SANDERSON, KELLIE E.** **(GRAHAM, FRANK L.)** ***Pathology, McMaster*** Characterization of p53 coding sequences in transformed human cells **1990-91 EP May 90–Dec 90**	$ 9,593/90-91
3633	**SANTOR, DARCY A.** **(ZUROFF, DAVID C.)** ***Psychology, McGill*** Dependency and self-criticism: depressive personality types and situational choices **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3634	**SAWYER, NICOLE** **(SEIDAH, NABIL G.)** ***Institut de recherches cliniques de Montréal*** Potentiel de maturation de la pro-opiomélanocortine de deux nouvelles sérines protéases **1990-91 EP avr 90–août 90**	$ 14,404/89-90 6,010/90-91
3635	**SAXE, BRENDA J.** **(JOHNSON-DOUGLAS, SUSAN M.)** ***Psychology, Ottawa*** Group treatment for adult incest survivors: an outcome study **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3636	**SCHALKWYK, LEONARD C.** **(DOOLITTLE, W. FORD)** ***Biochemistry, Dalhousie*** Studies on the structure of the genome of Halobacterium volcanii **1990-91 EP Apr 90–May 90**	$ 14,404/89-90 2,357/90-91
3637	**SCHALOMON, PETRA M.** **(ROBERTSON, ANN)** ***Psychology, Alberta*** **1990-91 EP Sep 90–Mar 91**	$ 9,411/90-91
3638	**SCHMANDT, ROSEMARIE E.** **(MILLS, GORDON B.)** ***Clinical Biochemistry, Toronto*** Characterization of a unique threonine/tyrosine kinase **1990-91 EP Apr 90–Jun 90**	$ 11,005/89-90 3,535/90-91
3639	**SEE, RAYMOND H.** **(CHOW, ANTHONY W.)** ***Pathology, British Columbia*** The role of toxic shock syndrome toxin-1 in the pathogenesis of toxic shock syndrome **1990-91 EP Apr 90–Mar 91**	$ 15,073/90-91
3640	**SEGUIN, MARIE-CLAUDEL** **(LEDOUX, MARIELLE)** ***Nutrition, Montréal*** Effets d'un apport insuffisant en calcium sur la densité osseuse des athlètes de haute performance **1990-91 EP jan 91–mar 91**	$ 4,113/90-91
3641	**SERVOS, PHILIP R.** **(GOODALE, MELVYN A.)** ***Psychology, Western Ontario*** Relationship between the cerebral hemispheres in humans and the execution of complex movements in space **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3642	**SHARP, ROBERT W.** **(KROPINSKI, ANDREW M.)** ***Microbiology and Immunology, Queen's*** Development of a cosmid cloning system for Pseudomonas aeruginosa **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3643	**SHELDON, KATHERINE M.** **(MARKS, ALEXANDER)** ***Biochemistry, Toronto*** Design of novel radioimmunoconjugates for the detection and treatment of ovarian cancer **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3644	**SHILTON, BRIAN H.** **(WALTON, DONALD J.)** ***Biochemistry, Queen's*** Factors influencing the glycation of liver alcohol dehydrogenase **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3645	**SHIMIZU, KATHERINE Y.** **(JEFFERIES, WILFRED A.)** ***Microbiology, British Columbia*** Analysis of mutant antigen presenting cell lines to determine the intracellular pathways for the processing and presentation of foreign antigens in the major histocompatibility complex class I and II restricted T lymphocyte responses **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3646	**SIDEROVSKI, DAVID P.** **(MAK, TAK W.)** ***Medical Biophysics, Toronto*** Generation of repressors to HIV-1 protein tat by random saturation mutagenesis **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3647	**SIDLE, AIKO** **(ISENMAN, DAVID E.)** ***Biochemistry, Toronto*** Examination of the structure-function relationships in the third component of human complement **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3648	**SIMARD, STEEVE** **(DUMONT, LOUIS)** ***Pharmacologie, Montréal*** Etude de cinq antagonistes calciques sur des anneaux artériels, chez le rat Sprague-Dawley male et normotensif **1990-91 EP jui 90–août 90**	$ 4,053/90-91
3649	**SIMOLA, SHELDENE K.** **(HOLDEN, RONALD R.)** ***Psychology, Queen's*** Developmental perspectives on the processes underlying test item responsing **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3650	**SINGH, SARYU** **(RUTT, BRIAN K.)** ***Medical Biophysics, Western Ontario*** Projection-presaturation: a novel technique for localizing multiple regions of interest in magnetic resonance imaging and spectroscopy **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91

List No.	Grant/Award	Financial History
3651	**SINNETT, DANIEL** **(LABUDA, DAMIAN)** ***Biochimie, Montréal*** Etude de l'amplification des séquences Alu dans le génome humain **1990-91 EP avr 90–mai 90**	$ 14,404/89-90 2,357/90-91
3652	**SKAKOON, EILEEN N.** **(DUNN, STANLEY D.)** ***Biochemistry, Western Ontario*** The use of oligonucleotide-directed site-specific mutagenesis in elucidating the function of specific amino acid residues in the regulation of oxidative phosphorylation **1990-91 EP Apr 90–Sep 90**	$ 7,470/89-90 7,248/90-91
3653	**SKINNER, FRANCES K.** **(BARDAKJIAN, BERJ L.)** ***Biomedical Engineering, Toronto*** Characterization of the ionic basis of the electrical control activity in gastric smooth muscle **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3654	**SLATER, SUSAN E.** **(KRANTIS, ANTHONY)** ***Physiology, Ottawa*** Intestinal blood flow changes during development of experimental duodenal ulcer **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3655	**SMALLSHAW, JOAN E.** **(WAYGOOD, E. BRUCE)** ***Biochemistry, Saskatchewan*** Construction of a bacterial expression system for antibody Fv fragment **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3656	**SMITH, CAROLYN L.** **(HAMMOND, GEOFFREY L.)** ***Biochemistry, Western Ontario*** Mapping the rat corticosteroid binding globulin steroid binding domain **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3657	**SMITH, GRAEME N.** **(PATRICK, JOHN E.)** ***Physiology, Western Ontario*** Fetal breathing movements: the effect of maternal ethanol infusion **1990-91 EP Apr 90**	$ 9,783/89-90 790/90-91
3658	**SMITH, IAN D.** **(GRACE, ANTHONY A.)** ***Behavioural Neuroscience, Pittsburgh*** The involvement of dopamine in schizophrenia **1990-91 EP May 90–Apr 91**	$ 11,005/89-90 15,162/90-91
3659	**SMITH, ISABEL M.** **(BRYSON, SUSAN E.)** ***Psychology, Dalhousie*** Neuropsychological aspects of motor function in autism **1990-91 EP Apr 90–Mar 91**	$ 10,869/89-90 15,073/90-91
3660	**SMITH, KAREN A.** **(PARHAD, IRMA M.)** ***Pathology, Calgary*** Neurofilament gene regulation in vivo **1990-91 EP Apr 90**	$ 14,404/89-90 1,178/90-91
3661	**SNODDY, DANIEL W.** **(GHOSH, HARA P.)** ***Biochemistry, McMaster*** Studies on the role of hydrophobic sequences in membrane anchoring and translocation **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3662	**SOLY, ROBERT R.R.** **(MEIGHEN, EDWARD A.)** ***Biochemistry, McGill*** Structure and mechanism of fatty acyl-protein synthetase from bioluminescent bacteria **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3663	**SQUIRES, PATRICIA M.** **(KENNEDY, THOMAS G.)** ***Physiology, Western Ontario*** Role of angiotensin in uterine decidualization in rats **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3664	**ST-PIERRE, BENOIT** **(BRISSON, NORMAND)** ***Biochimie, Montréal*** Etude fonctionnelle du promoteur de la phosphorylase de l'amidon de la pomme de terre **1990-91 EP avr 90–mai 90**	$ 14,404/89-90 2,357/90-91
3665	**ST-PIERRE, YVES** **(WATTS, TANIA H.)** ***Immunology, Toronto*** Origin and consequences of major histocompatibility complex class II - T cell receptor interactions in antigen presentation by B cells **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3666	**ST. AMAND, JANET L.** **(ASTELL, CAROLINE R.)** ***Biochemistry, British Columbia*** Expression and characterization of B19 proteins in COS cells and human bone marrow **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3667	**STEWART, SHERRY H.** **(PIHL, ROBERT O.)** ***Psychology, McGill*** Psychophysiological and cognitive effects of alcohol in patients with panic anxiety **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3668	**STONE, LISA A.** **(WELSH, JOELLEN)** ***Biochemistry, Ottawa*** Target tissue responsiveness to 1,25-dihydroxyvitamin D3 in experimental diabetes **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,629/90-91
3669	**STUMPF, ERIKA** **(CYNADER, MAX S.)** ***Psychology, British Columbia*** Neural mechanisms of sound localization: moving sound sources **1990-91 EP Apr 90–Aug 90**	$ 13,271/89-90 6,010/90-91

List No.	Grant/Award	Financial History
3670	**SVENDSEN, PIA C.** **(MCGHEE, JAMES D.)** ***Medical Biochemistry, Calgary*** The genetics of early development in the nematode C. elegans **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3671	**SYMONS, LAWRENCE A.** **(TIMNEY, BRIAN N.)** ***Psychology, Western Ontario*** Effects of early anisometropia on depth perception in cats **1990-91 EP Apr 90–Mar 91**	$ 13,837/89-90 15,073/90-91
3672	**SZTROLOVICS, ROBERT** **(ROUGHLEY, PETER J.)** **(VAN DER REST, MICHEL)** ***Medicine, McGill*** Identification of osteogenesis imperfecta mutations and sequence polymorphisms in type I procollagen cDNAs **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3673	**TACKABERRY, EILLEEN S.** **(BRODEUR, BERNARD R.)** ***Microbiology and Immunology, Ottawa*** An investigation of the role of anti-idiotype antibodies in the induction of immunity to human cytomegalovirus **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3674	**TAM, PATRICK** **(ASTELL, CAROLINE R.)** ***Biochemistry, British Columbia*** DNA replication of minute virus in mice **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3675	**TANCO, SHERYL A.** **(GORZALKA, BORIS B.)** ***Psychology, British Columbia*** The role of endogenous opiates and opiate receptor subtypes in the control of reproductive behaviour in male rats **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3676	**TARDIF, DOMINIQUE** **(LEMIEUX, REAL)** ***Microbiologie, Laval*** Contrôle de la prolifération des cellules tumorales de type myélome/plasmocytome **1990-91 EP avr 90–mar 91**	$ 14,404/89-90 15,073/90-91
3677	**THERRIEN, MARC** **(DROUIN, JACQUES)** ***Biochimie, Montréal*** Eléments de séquence et facteurs requis pour la spécificité d'expression du gène de la pro-opiomélanocortine de rat **1990-91 EP avr 90–jui 90**	$ 14,404/89-90 3,535/90-91
3678	**THOMPSON, DEBORAH A.** **(BIEDERMANN, HEINZ-J.)** ***Psychology, Queen's*** The effects of physical training on measures of the electromyographic power spectrum of the paraspinal muscles **1990-91 EP Aug 90–Mar 91**	$ 5,756/89-90 9,681/90-91
3679	**TONG, EDWARD C.Y.** **(PRATO, FRANK S.)** ***Physics, Western Ontario*** Three-dimensional magnetic resonance imaging of myocardial tissue blood flow and extracellular volumes **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3680	**TONN, GEORGE R.** **(AXELSON, JAMES E.)** ***Pharmaceutical Sciences, British Columbia*** Pharmacokinetics of propafenone: influence of pharmacological alterations of splanchnic blood flow and (or) hepatic metabolism **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 13,276/90-91
3681	**TOUGH, DAVID F.** **(CHOW, DONNA A.)** ***Immunology, Manitoba*** Natural antibody recognition of early events in oncogene-induced tumorigenesis **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3682	**TREMBLAY, PATRICK J.** **(JOLICOEUR, PAUL)** ***Institut de recherches cliniques de Montréal*** Caractérisation de souris transgéniques MMTV-v-Ha-ras et MMTV-neu **1990-91 EP avr 90–jui 90**	$ 14,404/89-90 3,535/90-91
3683	**TREVISAN, MARIA A. (MARYANNE)** **(ISCOVE, NORMAN N.)** ***Medical Biophysics, Toronto*** Characterization of hemopoietic precursors: CFC-multi, pre-CFC-multi and long-term reconstituting cells **1990-91 EP Apr 90–Mar 91**	$ 9,238/89-90 15,073/90-91
3684	**TRIGATTI, BERNARDO L.** **(GERBER, GERHARD E.)** ***Biochemistry, McMaster*** Long chain fatty acid transport in 3T3-L1 adipocytes **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3685	**TROTTIER, YVON** **(ANDERSON, W. ALAN)** **(WAITHE, WILLIAM I.)** ***Biologie, Laval*** Expression des ADNc des cytochromes P450 du rat dans les cellules de mammifères en culture et analyse de leur rôle biologique dans la mutagenèse et la transformation **1990-91 EP avr 90–jui 90**	$ 13,170/89-90 4,261/90-91
3686	**TRUDEL, SUZANNE M.** **(PAQUET, MICHEL R.)** **(GRINSTEIN, SERGIO)** ***Biochemistry, Toronto*** Mechanisms of signal transduction in primary and transformed leukocytes **1990-91 EP May 90–Aug 90**	$ 4,982/90-91
3687	**TURKSEN, KURSAD** **(AUBIN, JANE E.)** ***Dentistry, Toronto*** Analysis of the osteoblast lineage in vitro **1990-91 EP Apr 90–Nov 90**	$ 13,271/89-90 10,123/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3688	**UNDERHILL, D. ALAN** **(HAMMOND, GEOFFREY L.)** ***Biochemistry, Western Ontario*** Structure-function studies of human corticosteroid binding globulin, using the polymerase chain reaction **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3689	**VALIANTE, TAUFIK A.** **(CARLEN, PETER L.)** ***Physiology, Toronto*** Pathophysiology of sedative drug withdrawal seizures **1990-91 EP Jul 90–Mar 91**	$ 11,538/90-91
3690	**VAN RYN-MCKENNA, JOANNE** **(BUCHANAN, MICHAEL R.)** ***Pathology, McMaster*** To compare the pharmacodynamics, pharmacokinetics, antithrombotic, anticoagulant, and bleeding effects of dermatan sulfate and heparin after oral ingestion, and intravenous or intramuscular administration **1990-91 EP Apr 90–Jun 90**	$ 11,005/89-90 3,535/90-91
3691	**VANIER, LAURENT** **(PRUD'HOMME, GERALD J.)** ***Pathology, McGill*** T cell receptor-beta chain usage by autoaggressive T cell in type I diabetes **1990-91 EP Apr 90–Mar 91**	$ 9,238/89-90 15,073/90-91
3692	**VENANCE, SHANNON L.** **(PANG, STEPHEN C.-N.)** ***Anatomy, Queen's*** Factors influencing the proliferation of vascular smooth muscle cells in culture **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3693	**VERCHERE, C. BRUCE** **(BROWN, JOHN C.)** ***Physiology, British Columbia*** Effect of gastric inhibitory polypeptide on pure B-cells from normal and hyperinsulinemic rats **1990-91 EP Apr 90–Jun 90**	$ 11,005/89-90 3,535/90-91
3694	**VIGER, ROBERT S.** **(ROBAIRE, BERNARD)** ***Pharmacology and Therapeutics, McGill*** Regulation of epididymal steroid 4-ene 5-alpha-reductase **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 15,073/90-91
3695	**VOLDEN, JOANNE C.** **(MULCAHY, ROBERT F.)** ***Educational Psychology, Alberta*** Referential communication as related to perspective taking skills in autistic speakers **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3696	**VORALIA, MICHAEL** **(WEGMANN, THOMAS G.)** ***Immunology, Alberta*** Bone marrow transplantation and retroviral-mediated gene transfer into hemopoietic stem cells **1990-91 EP May 90–Aug 90**	$ 10,280/89-90 4,312/90-91

N° de liste	Subvention/Bourse	Résumé financier
3697	**VRIEZEN, ELLEN R.** **(MOSCOVITCH, MORRIS)** ***Psychology, Toronto*** Implicit memory in patients with Alzheimer's disease **1990-91 EP Apr 90–Mar 91**	$ 13,271/89-90 15,073/90-91
3698	**WAINWRIGHT, SANDRA L.** **(POWELL, WILLIAM S.)** ***Medicine, McGill*** Metabolism of LTB4 and related eicosanoids by inflammatory cells **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3699	**WALDRON, MARK A.** **(FISHER, JOHN T.)** ***Physiology, Queen's*** In vitro studies on airway smooth muscle: function of the non-adrenergic inhibitory system **1990-91 EP Apr 90–Jun 90**	$ 13,271/89-90 3,535/90-91
3700	**WALKER, JACQUELINE G.** **(MARTIN, GARRY L.)** ***Psychology, Manitoba*** Assessing and teaching auditory matching skills to severely mentally retarded persons **1990-91 EP Jun 90–Mar 91**	$ 12,716/90-91
3701	**WALKER, JAN A.** **(MANION, IAN G.)** ***Psychology, Ottawa*** Marital intervention program for couples with chronically ill children **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3702	**WALKER, W. BRUCE** **(HINDMARSH, K. WAYNE)** **(MAYER, JOEL M.)** ***Pharmacy, Saskatchewan*** Forensic matrix effects affecting the analysis of psychotropic agents **1990-91 EP Apr 90–Mar 91**	$ 11,447/89-90 15,424/90-91
3703	**WALTER, EMILY G.** **(TAYLOR, DIANE E.)** ***Medical Microbiology and Infectious Diseases, Alberta*** Plasmid-mediated tellurite resistance in the Enterobacteriaceae **1990-91 EP Apr 90–Sep 90**	$ 13,225/89-90 7,248/90-91
3704	**WANG, WEI** **(CHADEE, KHRISENDATH)** ***Parasitology, McGill*** The effect of Entamoeba histolytica on macrophage functions **1990-91 EP Apr 90–Mar 91**	$ 13,837/89-90 15,073/90-91
3705	**WARD, MICHAEL A.** **(RODER, JOHN C.)** ***Medical Genetics, Toronto*** Generation of neurological mutant mice by homologous recombination in embryonic stem cells **1990-91 EP Apr 90–Mar 91**	$ 3,935/89-90 15,073/90-91

List No.	Grant/Award	Financial History
3706	**WARREN, RICHARD A.** **(DYKES, ROBERT W.)** ***Neurology and Neurosurgery, McGill*** Effects of norepinephrine in the somatosensory cortex of the cat **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3707	**WATSON, MARK H.** **(MAK, ALAN S.-L.)** ***Biochemistry, Queen's*** Thin-filament regulation of striated and smooth muscle **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3708	**WEAVER, VALERIE M.** **(WELSH, JOELLEN)** ***Biochemistry, Ottawa*** Vitamin D metabolism: regulation of the 1-alpha-hydroxylase enzyme **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3709	**WEIR, M. LYNN** **(FLYNN, T. GEOFFREY)** **(CATES, GEORGE A.)** ***Biochemistry, Queen's*** The role of atrial natriuretic peptide and its homologue, iso-atrial natriuretic peptide, on the phosphorylation of proteins in smooth muscle and kidney cells **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3710	**WEISS, DAVID S.** **(REINIS, STANISLAV)** ***Psychology, Waterloo*** Modelling local neuronal networks in the auditory thalamus of the rat **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3711	**WESTRA, HENNY A.** **(KUIPER, NICHOLAS A.)** ***Psychology, Western Ontario*** Investigation of the determinants of individual expression of psychopathology **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3712	**WETMORE, LISA A.** **(NANCE, DWIGHT M.)** ***Physiology, Manitoba*** Sex differences in the role of the septal-hippocampal complex in the control of neuroendocrine and neuroimmune system(s) **1990-91 EP Aug 90–Mar 91**	$ 10,822/90-91
3713	**WEVRICK, RACHEL** **(TSUI, LAP-CHEE)** **(WILLARD, HUNTINGTON F.)** ***Medical Genetics, Toronto*** Physical organization and genetic behaviour of DNA sequences at the centromeres of human chromosomes **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91
3714	**WHITE, K. ANDREW** **(MACKIE, GEORGE A.)** **(BANCROFT, JOHN B.)** ***Biochemistry, Western Ontario*** RNAs encoded by the protexvirus clover yellow mosaic virus **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3715	**WHITE, STEPHEN F.** **(CHAPLER, CHRISTOPHER K.)** ***Physiology, Queen's*** The cardiovascular responses of the whole body, skeletal muscle, and gut after administration of dopamine or dopexamine to dogs ventilated with positive and expiratory pressure **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3716	**WIEMAN, CORNELIA G.** **(WINTER, DAVID A.)** ***Kinesiology, Waterloo*** The predisposing causes of falls in the elderly during walking, and measures that can be taken to reduce the incidence of falls or fear of falls in the elderly **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3717	**WILKINS, PAUL J.** **(BRIDGE, PETER J.)** ***Pathology, Queen's*** The molecular genetics of two X-linked disorders: adrenoleukodystrophy and Pelizaeus-Merzbacher disease **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3718	**WILKINSON, DAVID A.** **(MAGER, DIXIE L.)** ***Medical Genetics, British Columbia*** Expression of human endogenous retrovirus-like sequences **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3719	**WILKINSON, MARSHALL F.** **(KASTING, NORMAN W.)** ***Physiology, British Columbia*** The interaction between centrally released vasopressin and antipyretic drugs **1990-91 EP Apr 90–Sep 90**	$ 14,404/89-90 7,248/90-91
3720	**WILSON, LAURENE J.** **(ROESCH, RONALD)** ***Psychology, Simon Fraser*** Evaluation of supportive community homes in Vancouver: the proposed construct, "social climate", and its validity **1990-91 EP Sep 90–Mar 91**	$ 9,063/90-91
3721	**WISSE, BRENT E.** **(LAPP, WAYNE S.)** ***Physiology, McGill*** Kinetics of hemopoietic cell repopulation and donor cell chimerism in mice recovering from graft-versus-host disease **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3722	**WONG, CLARA L.F.** **(GREENWOOD, CAROL E.)** ***Nutritional Sciences, Toronto*** Effect of extracellular L-DOPA and (or) dopamine on the synthesis of catecholamines in the central nervous system **1990-91 EP Apr 90–Mar 91**	$ 8,648/89-90 15,073/90-91

N° de liste	Subvention/Bourse	Résumé financier

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3723	**WONG, M.S. JOHNSON (MURPHY, LEIGH C.)** ***Biochemistry and Molecular Biology, Manitoba*** Mechanisms of hormone regulation of epidermal growth factor gene expression in T47-D human breast cancer cells **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3724	**WONG, MARGARET (SCHIMMER, BERNARD P.)** ***Pharmacology, Toronto*** The role of cAMP-dependent protein kinase in the regulation of adrenocortical functions **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3725	**WOODCROFT, KIMBERLEY J. (BEND, JOHN R.)** ***Pharmacology and Toxicology, Western Ontario*** N-Aralkylated derivatives of 1-aminobenzotriazole: isozyme-selective, tissue-specific, mechanism-based inhibitors of the cytochrome P-450 monooxygenase system **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3726	**WOULFE, JOHN M. (BEAUDET, ALAIN)** ***Neurology and Neurosurgery, McGill*** Neurotensin-containing neurons: anatomical aspects of their interactions with, and influence on, other chemically defined systems in the central nervous system **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3727	**WRANA, JEFFREY L. (SODEK, JAROSLAV)** ***Biochemistry, Toronto*** The effects of transforming growth factor beta on connective tissue cells **1990-91 EP May 90–Dec 90**	$ 6,745/89-90 9,193/90-91
3728	**WRIGHT, MATTHEW R. (RURAK, DANNY W.) (AXELSON, JAMES E.)** ***Pharmaceutical Sciences, British Columbia*** Ritodrine placental transfer: maternal and fetal pharmacokinetics **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3729	**XIONG, FEI (HEW, CHOY-LEONG)** ***Biochemistry, Toronto*** Studies on the mechanism(s) underlying the expression regulation of gonadotropin gene in salmon pituitary gland **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 6,010/90-91
3730	**YEE, GAYLE M. (KENNEDY, THOMAS G.)** ***Physiology, Western Ontario*** cAMP as an intracellular messenger of PGE2 during decidualization in the rat **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3731	**YEUNG, IVAN W.T. (LEE, TING Y.)** ***Medical Biophysics, Western Ontario*** In vivo measurement of microvascular permeability and blood volume in brain tumours **1990-91 EP Apr 90–Mar 91**	$ 12,138/89-90 15,073/90-91
3732	**YONG, CARL B. (HASSELL, JOHN A.)** ***Biology, McMaster*** Enhancer-dependent in vitro transcription assays **1990-91 EP Apr 90–Jun 90**	$ 14,404/89-90 3,535/90-91
3733	**YOUNG, ALAN J. (HAY, JOHN B.)** ***Immunology, Toronto*** Effect of tumor necrosis factor on lymphocyte migration **1990-91 EP May 90–Mar 91**	$ 13,894/90-91
3734	**YOUNG, RACHEL A. (MACLEAN, ALISTAIR W.) (KNOWLES, JOHN B.)** ***Psychology, Queen's*** Process-S: a model for depression, influence of naps and age **1990-91 EP Apr 90–Aug 90**	$ 14,404/89-90 5,878/90-91
3735	**YU, FRANK H. (MOON, YOUNG S.)** ***Obstetrics and Gynecology, British Columbia*** Steroidogenic capability of granulosa cells of superovulating ovaries **1990-91 EP Apr 90–Aug 90**	$ 8,648/89-90 6,010/90-91
3736	**ZASTAWNY, ROMAN L. (LING, VICTOR)** ***Medical Biophysics, Toronto*** Cloning and characterization of genomic sequences overlapping the hamster P-glycoprotein genes **1990-91 EP Apr 90–Mar 91**	$ 14,404/89-90 15,073/90-91
3737	**ZHOU, MING (LARSEN, BODIL A.)** ***Immunology, Memorial University of Newfoundland*** Characteristics of the C3d/EBV receptor (CR2) involved in B lymphocyte transformation **1990-91 EP Apr 90–Mar 91**	$ 11,005/89-90 15,073/90-91
3738	**ZHU, QINZHANG (SOLOMON, SAMUEL)** ***Biochemistry, McGill*** Isolation and mechanism of action of corticostatic peptides **1990-91 EP Apr 90–Nov 90**	$ 14,404/89-90 10,123/90-91
3739	**ZIDICHOUSKI, JEFFREY A. (SMITH, PETER A.)** ***Pharmacology, Alberta*** The signal transduction of two cell specific muscarine-activated responses in the amphibian paravertebral sympathetic ganglia **1990-91 EP Apr 90–May 90**	$ 12,138/89-90 2,357/90-91

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

Special (International Youth Year) Studentships/Bourses spéciales de stagiaire de recherche (année internationale de la jeunesse)

Total value/valeur totale: $21,650 1990-91.

3740 **CHANT, JOHN S.** — $ 15,400/89-90, 3,750/90-91
(HERSKOWITZ, IRA)
Biochemistry and Biophysics, California (San Francisco)
Identification and characterization of the genes interacting with the MAT locus to determine cell type in S. cerevisiae
1990-91 EP Jun 90–Aug 90

3741 **GUO, XIAOJIA** — $ 15,400/89-90, 3,125/90-91
(DENHARDT, DAVID T.)
Biochemistry, Western Ontario
Factors controlling gene expression
1990-91 EP Apr 90–May 90

3742 **MITCHELL, LISA M.** — $ 15,000/89-90, 7,900/90-91
(YOUNG, ALLAN)
Anthropology, Case Western Reserve
Clinical and maternal beliefs about ultrasound fetal imaging in Montreal
1990-91 EP Jul 90–Dec 90

3743 **WANG, YONGCHANG** — $ 16,291/89-90, 6,875/90-91
(FROST, BARRIE J.)
Psychology, Queen's
Visual neurophysiology
1990-91 EP Apr 90–Aug 90

University-Industry Studentships/Bourses de stagiaire de recherche université-industrie

Total value (MRC only)/valeur totale (CRM seulement): $43,498 1990-91.

3744 **BRENAN, COLIN J.H.** — $ 9,063/90-91
(HUNTER, IAN W.)
Biomedical Engineering, McGill
Development of a high resolution confocal coherent anti-Stokes Raman spectroscopy microprobe for muscle fiber mechanics studies
1990-91 expenditure breakdown: additional support will be provided by MPB Technologies Inc. of Dorval, Québec
1990-91 EP Sep 90–Mar 91

3745 **CHARETTE, PAUL** — $ 9,063/90-91
(HUNTER, IAN W.)
Biomedical Engineering, McGill
Development of a next generation micro-robot for studying small structures inside individual muscle cells
1990-91 expenditure breakdown: additional support will be provided by MPB Technologies Inc. of Dorval, Québec
1990-91 EP Sep 90–Mar 91

3746 **MORENCY, MICHEL A.** — $ 4,324/89-90, 7,536/90-91
(MISHRA, RAM K.)
Psychiatry, McMaster
Studies on the role of cholecystokinin in central nervous system functions
1990-91 expenditure breakdown: joint award with Ciba-Geigy Canada Ltd. of Mississauga
1990-91 EP Apr 90–Mar 91

3747 **TOUSIGNANT, CHRISTINE** — $ 5,769/90-91
(REGOLI, DOMENICO C.)
(GUILLEMETTE, GAETAN)
Pharmacologie, Sherbrooke
Développement d'agonistes et d'antagonistes sélectifs pour les récepteurs des neurokinines et des kinines
1990-91 ventilation des dépenses: programme conjoint de bourses avec Ciba-Geigy Canada Ltée de Mississauga
1990-91 EP jlt 90–mar 91

3748 **TSUI, C.-H. BAN** — $ 4,531/90-91
(YEUNG, POLLEN K.F.)
Pharmacy, Dalhousie
Effects of diltiazen and its metabolites on the uptake and metabolism of adenosine
1990-91 expenditure breakdown: joint award with Ciba-Geigy Canada Ltd. of Mississauga
1990-91 EP Sep 90–Mar 91

3749 **TYNDALE, RACHEL F.** — $ 6,635/89-90, 7,536/90-91
(INABA, TADANOBU)
(KALOW, WERNER)
Pharmacology, Toronto
Characterization and role of sparteine monooxygenase in the central nervous system
1990-91 expenditure breakdown: joint award with Ciba-Geigy Canada Ltd. of Mississauga
1990-91 EP Apr 90–Mar 91

Farquharson Research Scholarships/Bourses de recherche Farquharson

Total value/valeur totale: $1,022,459 1990-91.

3750	Dean, Faculty of Medicine, Calgary	$ 20,430/89-90, 9,815/90-91
3751	Doyen, Faculté de médecine dentaire, Montréal	$ 20,430/89-90, 21,456/90-91
3752	Doyen, Faculté de médecine, Sherbrooke	$ 23,160/89-90, 21,456/90-91
3753	Dean, Faculty of Dentistry, British Columbia	$ 23,160/89-90, 22,890/90-91
3754	Dean, Faculty of Dentistry, Toronto	$ 37,455/89-90, 39,336/90-91
3755	Dean, Faculty of Dentistry, Manitoba	$ 17,025/89-90, 17,880/90-91
3756	Dean, Faculty of Dentistry, Western Ontario	$ 17,025/89-90, 17,880/90-91
3757	Dean, Faculty of Medicine, Toronto	$ 134,850/89-90, 135,888/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3758	Dean, Faculty of Medicine, Manitoba	$ 34,050/89-90 35,760/90-91
3759	Dean, Faculty of Medicine, Western Ontario	$ 40,860/89-90 42,912/90-91
3760	Dean, Faculty of Medicine, McGill	$ 84,450/89-90 91,560/90-91
3761	Director, College of Pharmacy, Dalhousie	$ 10,215/89-90 10,728/90-91
3762	Dean, Faculty of Medicine, Alberta	$ 27,240/89-90 28,608/90-91
3763	Dean, Faculty of Medicine, Queen's	$ 28,605/89-90 28,608/90-91
3764	Dean, Faculty of Health Sciences, Ottawa	$ 27,240/89-90 28,608/90-91
3765	Dean, Faculty of Dentistry, Dalhousie	$ 10,215/89-90 10,728/90-91
3766	Director, School of Pharmacy, Memorial University of Newfoundland	$ 6,810/89-90 7,152/90-91
3767	Dean, Faculty of Pharmacy, Toronto	$ 20,430/89-90 21,456/90-91
3768	Dean, Faculty of Pharmacy, Manitoba	$ 10,215/89-90 10,728/90-91
3769	Dean, Faculty of Medicine, Dalhousie	$ 27,240/89-90 28,608/90-91
3770	Doyen, Faculté de pharmacie, Montréal	$ 17,025/89-90 17,880/90-91
3771	Dean, College of Dentistry, Saskatchewan	$ 10,215/89-90 10,728/90-91
3772	Dean, Faculty of Health Sciences, McMaster	$ 44,265/89-90 46,488/90-91
3773	Dean, Faculty of Pharmacy and Pharmaceutical Sciences, Alberta	$ 17,025/89-90 17,880/90-91
3774	Doyen, Faculté de médecine, Laval	$ 33,375/89-90 35,052/90-91
3775	Dean, College of Pharmacy, Saskatchewan	$ 13,620/89-90 14,304/90-91
3776	Dean, Faculty of Dentistry, McGill	$ 14,985/89-90 15,738/90-91
3777	Directeur, Ecole de pharmacie, Laval	$ 10,215/89-90 10,728/90-91
3778	Dean, Faculty of Dentistry, Alberta	$ 17,025/89-90 17,880/90-91
3779	St. Boniface General Hospital Research Foundation Inc. (Winnipeg) (special award for the support of two summer students per annum for a five-year period)	$ 6,300/89-90 6,300/90-91
3780	Dean, Faculty of Pharmaceutical Sciences, British Columbia	$ 30,645/89-90 32,184/90-91
3781	Doyen, Faculté de médecine, Montréal	$ 70,860/89-90 68,688/90-91
3782	Dean, College of Medicine, Saskatchewan	$ 17,025/89-90 17,880/90-91

N° de liste	Subvention/Bourse	Résumé financier
3783	Dean, Faculty of Medicine, Memorial University of Newfoundland	$ 13,620/89-90 14,304/90-91
3784	Directeur, Ecole de médecine dentaire, Laval	$ 10,215/89-90 10,728/90-91
3785	Dean, Faculty of Medicine, British Columbia	$ 51,075/89-90 53,640/90-91

University-Industry Summer Research Studentships/Bourses d'été pour stagiaires de recherche université-industrie

Joint program with the PMAC Health Research Foundation (Ottawa). Total value (MRC only): $152,845 1990-91.

Programme conjoint de bourses avec la Fondation ACIM pour la recherche en sciences de la santé (Ottawa). Valeur totale (CRM seulement): $152,845 1990-91.

3786	Dean, College of Medicine, Saskatchewan	$ 8,600/90-91
3787	Dean, Faculty of Medicine, Calgary	$ 10,500/90-91
3788	Dean, Faculty of Medicine, Toronto	$ 3,440/90-91
3789	Doyen, Faculté de médecine, Sherbrooke	$ 6,375/90-91
3790	Dean, Faculty of Pharmacy, Toronto	$ 3,440/90-91
3791	Dean, Faculty of Medicine, Dalhousie	$ 8,600/90-91
3792	Director, School of Pharmacy, Memorial University of Newfoundland	$ 3,440/90-91
3793	Dean, Faculty of Health Sciences, Ottawa	$ 10,320/90-91
3794	Directeur, Ecole de pharmacie, Laval	$ 3,440/90-91
3795	Dean, Faculty of Pharmaceutical Sciences, British Columbia	$ 3,440/90-91
3796	Dean, Faculty of Pharmacy, Manitoba	$ 3,440/90-91
3797	Dean, Faculty of Medicine, Alberta	$ 6,880/90-91
3798	Dean, Faculty of Health Sciences, McMaster	$ 5,250/90-91
3799	Dean, College of Pharmacy, Saskatchewan	$ 3,440/90-91
3800	Doyen, Faculté de médecine, Laval	$ 10,320/90-91
3801	Dean, Faculty of Pharmacy and Pharmaceutical Sciences, Alberta	$ 3,440/90-91
3802	Doyen, Faculté de pharmacie, Montréal	$ 3,440/90-91
3803	Dean, Faculty of Medicine, Western Ontario	$ 3,440/90-91
3804	Director, College of Pharmacy, Dalhousie	$ 3,440/90-91
3805	Dean, Faculty of Medicine, British Columbia	$ 6,880/90-91
3806	Dean, Faculty of Medicine, Manitoba	$ 10,320/90-91
3807	Dean, Faculty of Medicine, Queen's	$ 10,320/90-91
3808	Dean, Faculty of Medicine, McGill	$ 10,320/90-91
3809	Doyen, Faculté de médecine, Montréal	$ 10,320/90-91

List No.	Grant/Award	Financial History

Visiting Scientists/Chercheurs invités

Total value/valeur totale: $140,030 1990-91.

3810 **CHINARD, FRANCIS P.** — $ 6,110/90-91
Medicine, U. of Medicine & Dentistry of New Jersey (Newark)
Toward the cost of spending from April 1990 to June 1990 with Dr. Carl A. Goresky, Department of Medicine, McGill University

3811 **GARCIA, LUIS F.** — $ 16,500/90-91
Universidad de Antioquia (Medellin, Colombia)
Toward the cost of spending from July 1990 to June 1991 with Dr. Emil Skamene, Department of Medicine, McGill University

3812 **HOLMA, BO O.A.** — $ 10,000/90-91
Hygiene, Copenhagen
Toward the cost of spending six months with Dr. Malcolm King, Department of Medicine, University of Alberta

3813 **KHANDELWAL, RAMJI L.** — $ 8,352/90-91
Biochemistry, Saskatchewan
Toward the cost of spending from July 1990 to December 1990 in the Department of Medical Biochemistry, University of Calgary; from January 1991 to March 1991 in the School of Life Sciences, Jawaharlal Nehru University (New Delhi); and from April 1991 to June 1991 in the Department of Biochemistry, Katholieke Universiteit Leuven

3814 **KORECKY, BORIVOJ** — $ 1,500/90-91
Physiology, Ottawa
Toward the cost of spending September 1990 with Dr. B. Swynghedauw and Dr. A.M. Lompré, Hôpital Lariboisière (Paris)

3815 **LICHARDUS, BRANISLAV** — $ 10,000/90-91
Experimental Endocrinology, Slovak Academy of Sciences (Bratislava)
Toward the cost of spending from April 1990 to September 1990 with Dr. Harald Sonnenberg, Department of Physiology, University of Toronto

3816 **LOWN, J. WILLIAM** — $ 2,940/90-91
Chemistry, Alberta
Toward the cost of spending from October 5, 1990, to November 13, 1990, with Dr. Mo Jian, Department of Chemistry, 4th Military Medical University (Xi'an, People's Republic of China)

3817 **MERRILEES, MERVYN J.** — $ 5,000/90-91
Anatomy, Auckland
Toward the cost of spending from January 1991 to November 1991 with Dr. Jaroslav Sodek, Faculty of Dentistry, University of Toronto

Liste N°	Subvention/Bourse	Résumé financier

3818 **MICHALAK, TOMASZ I.** — $ 5,000/90-91
Basic Medical Sciences, Memorial University of Newfoundland
Toward the cost of spending from March 1991 to December 1991 with Dr. Francis V. Chisari, Scripps Clinic and Research Foundation (La Jolla)

3819 **NJAR, VINCENT C.O.** — $ 9,175/90-91
Chemistry, Ibadan
Aide pour passer du 15 novembre 1990 au 14 février 1991 auprès du Dr Liat Tan, Département de biochimie, Université de Sherbrooke

3820 **RADICS, LAJOS R.** — $ 14,750/89-90, 8,250/90-91
Chemistry, Hungarian Academy of Sciences (Budapest)
Toward the cost of spending 12 months with Drs. J.J. George Krepinsky and Jeremy P. Carver, Department of Medical Genetics, University of Toronto

3821 **SIGURDSSON, STEFAN B.** — $ 8,357/89-90, 5,143/90-91
Physiology, Iceland
Toward the cost of spending from January 1990 to July 1990 with Dr. Newman L. Stephens, Department of Physiology, University of Manitoba

3822 **STEINBERGER, ITZHAK T.** — $ 7,260/90-91
Physics, Hebrew University (Jerusalem)
Aide pour passer de juillet 1990 à octobre 1990 auprès du Dr Léon Sanche, Département de médecine nucléaire et radiobiologie, Université de Sherbrooke

3823 **VIGH-TEICHMANN, INGEBORG** — $ 9,950/89-90, 15,975/90-91
Anatomy, Semmelweis University (Budapest)
Aide pour passer de février 1990 à janvier 1991 auprès des Drs M. Ather Ali et Michel Anctil, Département de sciences biologiques, Université de Montréal

3824 **YULIS, CARLOS R.** — $ 10,825/90-91
Histology and Pathology, Universidad Austral de Chile (Valdivia)
Toward the cost of spending from May 1990 to October 1990 with Dr. Karl Lederis, Department of Pharmacology and Therapeutics, University of Calgary

3825 **ZAKAR, TAMAS** — $ 20,848/89-90, 18,000/90-91
Biochemistry, Semmelweis University (Budapest)
Toward the cost of spending from June 1989 to May 1991 with Dr. David M. Olson, Department of Pediatrics, University of Western Ontario

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History	N° de liste	Subvention/Bourse	Résumé financier

France-Canada Exchange Programs/ Echanges scientifiques France-Canada

Total value/valeur totale: $64,493 1990-91.

3826 **ARANDA, JACOB V.** — $ 9,420/90-91
Pediatrics, McGill
Toward the cost of spending from July 1990 to June 1991 with Dr. Paul Vert, INSERM (Nancy, France)

3827 **CLEZARDIN, PHILIPPE** — $ 3,740/90-91
Faculté de médecine Alexis Carrel (Lyon)
Aide pour passer août 1990 auprès du Dr Jeanne Drouin, Département de médecine, Université d'Ottawa

3828 **DAVID, JEAN-CLAUDE** — $ 21,8[illegible]/90-91
Biochimie, Rennes
Aide pour passer d'octobre 1990 à janvier 1991 auprès du Dr Harold A. Robertson, Département de pharmacologie, Université Dalhousie

3829 **HERMIER, DOMINIQUE** — $ 13,899/90-91
Hôpital de la Pitié (Paris)
Aide pour passer de juin 1990 à novembre 1990 auprès du Dr David N. Brindley, Département de biochimie, Université d'Alberta

3830 **HUGHSON, RICHARD L.** — $ 7,787/90-91
Kinesiology, Waterloo
Toward the cost of spending from August 1990 to July 1991 with Dr. Claude Gharib, Faculté de médecine Grange-Blanche, Université Claude Bernard (Lyons)

3831 **WINOCOUR, PETER D.** — $ 7,804/90-91
Pathology, McMaster
Toward the cost of spending from August 1990 to January 1991 with Dr. John L. McGregor, Faculté de médecine Alexis Carrel (Lyons)

Italy-Canada Exchange Program/Echanges scientifiques Italie-Canada

Total value/valeur totale: $19,377 1990-91.

3832 **AGOSTINELLI, ENZO** — $ 4,000/90-91
Biochemistry, Rome
Aide pour passer du 16 janvier 1991 au 15 mai 1991 auprès des Drs M. Alexandre Mateescu, Guy Fortier et Diana Bates, Département de chimie, Université du Québec à Montréal

3833 **BATTISTA, RENALDO N.** — $ 2,377/90-91
Epidemiology and Biostatistics, McGill
Toward the cost of spending from February 1991 to May 1991 with Dr. Francesco Taroni, Laboratorio di Epidemiologia e Biostatisca, Istituto Superiore di Sanità (Rome)

3834 **FEDOROFF, SERGEY** — $ 1,800/90-91
Anatomy, Saskatchewan
Toward the cost of spending from June 1990 to July 1990 with Dr. Fulvia Gremo, Department of Cytomorphology, University of Cagliari

3835 **MAGNANI, CORRADO** — $ 6,400/90-91
Biomedical Sciences, Turin
Aide pour passer de juin 1990 à septembre 1990 auprès du Dr Jack Siemiatycki, Institut Armand-Frappier (Laval-des-Rapides, Québec)

3836 **TANCREDI, VIRGINIA** — $ 4,800/90-91
Experimental Medicine, Rome
Toward the cost of spending from July 1990 to September 1990 with Dr. Donald W. Baxter, Department of Neurology and Neurosurgery, McGill University

Brazil-Canada Exchange Program/Echanges scientifiques Brésil-Canada

Total value/valeur totale: $3,700 1990-91.

3837 **BELIK, JACQUES** — $ 1,700/90-91
Pediatrics and Child Health, Manitoba
Toward the cost of spending from July 1990 to August 1990 with Dr. Antonio C.M. Paiva, Department of Biophysics, Escola Paulista de Medicina (Sao Paulo)

3838 **GUTKOWSKA, JOLANTA** — $ 2,000/90-91
Institut de recherches cliniques de Montréal
Aide pour passer novembre 1990 auprès du Dr Marina Turrin, Instituto de ciencias biomedicas, Universidade de Sao Paulo

East European Exchange Program/ Programme d'échanges scientifiques avec l'Europe de l'est

Total value/valeur totale: $176,697 1990-91.

3839 **DEVAY, ATTILA** — $ 34,700/90-91
Pharmaceutical Sciences, Semmelweis University (Budapest)
Toward the cost of spending from October 1990 to September 1991 with Dr. Michael Mezei, College of Pharmacy, Dalhousie University

3840 **DRABER, PETER** — $ 9,117/90-91
Czechoslovak Academy of Sciences (Prague)
Toward the cost of spending from March 1991 to August 1991 with Dr. Abraham Fuks and Dr. Clifford P. Stanners, Cancer Centre, McGill University

3841 **HAJEK, IVAN** — $ 7,859/90-91
Czechoslovak Academy of Sciences (Prague)
Toward the cost of spending from March 1991 to May 1991 with Dr. Leif Hertz, Department of Pharmacology, University of Saskatchewan

3842 **PATON, EUGENIA B.** — $ 9,833/90-91
Ukrainian SSR Academy of Sciences (Kiev)
Toward the cost of spending from February 1991 to April 1991 with Dr. James D. Friesen, Department of Medical Genetics, University of Toronto

List No.	Grant/Award	Financial History
3843	**PREDA, ISTVAN** ***Medicine, Postgraduate Medical School (Budapest)*** Aide pour passer de novembre 1990 à avril 1991 auprès des Drs Fernand A. Roberge et Réginald A. Nadeau, Hôpital du Sacré-Coeur de Montréal	$ 27,844/90-91
3844	**RIESS, OLAF** ***Medical Genetics, Humboldt-Universitat zu Berlin*** Toward the cost of spending from July 1990 to June 1992 with Dr. Michael R. Hayden, Department of Medical Genetics, University of British Columbia	$ 44,544/90-91
3845	**TOROK, TAMAS L.** ***Pharmacology, Semmelweis University (Budapest)*** Toward the cost of spending from October 1990 to September 1992 with Dr. Frank S. LaBella, Department of Pharmacology and Therapeutics, University of Manitoba	$ 42,800/90-91

University-Industry Visiting Program/ Programme d'échanges université-industrie

Total value (MRC only)/valeur totale (CRM seulement): $6,667 1990-91.

3846	**CHARETTE, PAUL** ***MPB Technologies Inc. (Dorval, Québec)*** Toward the cost of spending from September 1988 to August 1990 with Dr. Ian W. Hunter, Biomedical Engineering Unit, McGill University *1990-91 expenditure breakdown: additional support will be provided by MPB Technologies Inc.*	$ 25,333/89-90 6,667/90-91

Visiting Professorships/Professeurs invités

Total value/valeur totale: $19,185 1990-91.

3847	**BOWDEN, GEORGE H.W.** ***Dentistry, Manitoba*** Toward the cost of a visit to the Faculty of Dentistry, University of Toronto	$ 390/90-91
3848	**COLLIER, BRIAN** ***Pharmacology and Therapeutics, McGill*** Toward the cost of a visit to the Faculty of Pharmaceutical Sciences, University of British Columbia	$ 1,774/89-90 335/90-91
3849	**DANIEL, EDWIN E.** ***Biomedical Sciences, McMaster*** Toward the cost of a visit to the Faculty of Pharmaceutical Sciences, University of British Columbia	$ 877/90-91
3850	**EVERTS, VINCENT** ***Cell Biology, Amsterdam*** Toward the cost of a visit to the Faculty of Dentistry, University of Toronto	$ 1,250/90-91
3851	**HARGREAVES, JOHN A.** ***Dentistry, Alberta*** Toward the cost of a visit to the College of Dentistry, University of Saskatchewan	$ 189/89-90 1,002/90-91
3852	**JONES, DEREK W.** ***Dentistry, Dalhousie*** Toward the cost of a visit to the Faculty of Dentistry, University of Alberta	$ 1,614/90-91
3853	**JONES, DEREK W.** ***Dentistry, Dalhousie*** Toward the cost of a visit to the Faculty of Dentistry, University of British Columbia	$ 793/89-90 1,290/90-91
3854	**KOHLER, FRANCOIS** ***Faculté de médecine (Nancy)*** Aide pour séjourner à la Faculté de médecine dentaire, Université de Montréal	$ 1,250/90-91
3855	**LAMY, PETER P.** ***Pharmacy, Maryland*** Toward the cost of a visit to the College of Pharmacy, University of Saskatchewan	$ 1,250/90-91
3856	**LUND, JAMES P.** ***Médecine dentaire, Montréal*** Toward the cost of a visit to the Faculty of Dentistry, University of Western Ontario	$ 233/90-91
3857	**MACLENNAN, DAVID H.** ***Banting and Best Department of Medical Research, Toronto*** Toward the cost of a visit to the Faculty of Medicine, Queen's University	$ 749/90-91
3858	**MIDHA, KAMAL K.** ***Pharmacy, Saskatchewan*** Toward the cost of a visit to the College of Pharmacy, Dalhousie University	$ 1,969/90-91
3859	**MOLDOFSKY, HARVEY** ***Psychiatry, Toronto*** Toward the cost of a visit to the Faculty of Medicine, Queen's University	$ 974/90-91
3860	**PANG, K. SANDY** ***Pharmacy, Toronto*** Toward the cost of a visit to the Faculty of Pharmacy, University of Manitoba	$ 348/89-90 977/90-91
3861	**ROGERS, JAMES A.** ***Pharmacy and Pharmaceutical Sciences, Alberta*** Toward the cost of a visit to the Faculty of Pharmacy, University of Manitoba	$ 319/90-91
3862	**SKUP, DANIEL S.** ***Biochimie, Montréal*** Toward the cost of a visit to the Faculty of Medicine, Memorial University of Newfoundland	$ 385/90-91
3863	**SOLOMON, SAMUEL** ***Medicine, McGill*** Toward the cost of a visit to the Faculty of Medicine, University of Calgary	$ 580/89-90 863/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3864	**TONZETICH, JOSEPH** ***Dentistry, British Columbia*** Toward the cost of a visit to the Faculty of Dentistry, University of Alberta	$ 958/90-91
3865	**VENKATARAMANAN, RAMAN** ***Pharmacy, Pittsburgh*** Toward the cost of a visit to the Faculty of Pharmaceutical Sciences, University of British Columbia	$ 1,250/90-91
3866	**WILKINSON, GRANT R.** ***Pharmacology, Vanderbilt*** Toward the cost of a visit to the Faculty of Pharmacy, University of Toronto	$ 1,250/90-91

Symposia and Workshops/Colloques et ateliers

Total value/valeur totale: $192,715 1990-91.

3867	First Altschul symposium on atherosclerosis: cellular and molecular interactions in the artery wall, Saskatoon, April 29 - May 2, 1990	$ 5,000/90-91
3868	Symposium: infections and AIDS, held as part of the annual meeting of the Canadian Society of Microbiologists, Calgary, June 1990	$ 2,000/90-91
3869	Problèmes d'otite et d'audition chez les populations autochtones, un symposium d'une journée à l'intérieur du 8e congrès international pour la santé circumpolaire, Whitehorse, les 20-25 mai 1990	$ 2,000/90-91
3870	10th international biophysics congress, Vancouver, July 29 - August 3, 1990	$ 7,500/90-91
3871	Support of two symposia at the 13th annual meeting of the Canadian College of Neuropsychopharmacology, Banff, Alberta, June 4-5, 1990	$ 1,000/90-91
3872	Third IBRO world congress of neuroscience, Montréal, August 4-9, 1991	$ 50,000/90-91
3873	Adjuvants: advances in technology and alternatives to Freund's, a symposium organized by the Animal Resources Centre of McGill University, Montréal, May 10, 1990	$ 1,300/90-91
3874	Konrad Bloch symposium, Lake Louise, Alberta, May 26-31, 1990	$ 2,500/90-91
3875	Support of the symposia program at the 33rd annual meeting of the Canadian Federation of Biological Societies, Halifax, June 14-16, 1990	$ 15,000/90-91
3876	Symposium on excitatory amino acid receptors in the brain: functions and disorders, held during the meeting of the Canadian Society of Neurological Sciences, Montréal, June 23-24, 1990	$ 5,000/90-91
3877	4e congrès international francophone de gérontologie, Montréal, du 30 septembre 1990 au 3 octobre 1990	$ 5,000/90-91

N° de liste	Subvention/Bourse	Résumé financier
3878	Post-Sicot 90 conference on clinical and biomechanical aspects of articular bearings, Kingston, September 15-16, 1990	$ 2,500/90-91
3879	Symposia held as part of the annual meeting of the Canadian Society for Clinical Investigation, Toronto, September 14-17, 1990	$ 12,500/90-91
3880	Symposium on amino acids as neurotransmitters, Vancouver, May 28-29, 1990	$ 2,500/90-91
3881	Symposium on the molecular basis of viral pathogenesis, held during the meeting of the Canadian Society of Microbiologists, Calgary, June 5, 1990	$ 1,500/90-91
3882	Fifth Toronto stroke workshop, Toronto, September 12-14, 1990	$ 3,000/90-91
3883	Symposium (les grands défis de l'épidémiologie en psychiatrie contemporaine) du Ve congrès de la Fédération internationale d'épidémiologie psychiatrique, Montréal, les 6-8 juin 1990	$ 4,000/90-91
3884	Ateliers des 5èmes journées d'études sur la chimie sous rayonnement, Sherbrooke, les 1-6 juillet 1990	$ 3,500/90-91
3885	Symposium on neuronal degeneration in aging and disease, London, Ontario, September 27-28, 1990	$ 3,500/90-91
3886	Aide financière pour le congrès annuel de l'Association canadienne-française pour l'avancement des sciences	$ 10,000/90-91
3887	Canadian Association of Speech-Language Pathologists and Audiologists conference, Vancouver, May 9-12, 1990	$ 1,915/90-91
3888	Genetics and alcoholism: recent advances, a satellite symposium of the joint congress of the International Society for Biomedical Research on Alcoholism and the Research Society on Alcoholism, Montréal, June 15-16, 1990	$ 3,000/90-91
3889	Symposium satellite: le rein dans l'hypertension, du 13e congrès de la Société internationale d'hypertension, Québec, le 1er juillet 1990	$ 3,000/90-91
3890	First Craigie conference on brain capillaries, Toronto, June 24, 1990	$ 1,500/90-91
3891	Symposium on vasoactive peptides and hypertension, Montréal, June 24, 1990	$ 2,000/90-91
3892	Workshop on provision of oral health care for HIV disease, London, Ontario, October 10-13, 1990	$ 5,000/90-91
3893	Workshop on gender science and medicine II, Toronto, November 2, 1990	$ 2,000/90-91
3894	Symposium on atrial natriuretic factor: a decade of ANF research, held during the 13th scientific meeting of the International Society of Hypertension, Ottawa, June 21-23, 1990	$ 5,000/90-91
3895	Dunlop international symposium on rheumatoid arthritis, Montréal, May 1991	$ 5,000/90-91

List No.	Grant/Award	Financial History
3896	Symposium: dopamine et hypertension, à l'occasion du 13e congrès international d'hypertension, Montréal, le 22 juin 1990	$ 3,000/90-91
3897	XXXII congrès annuel du Club de recherches cliniques du Québec, Pointe-au-Pic, Québec, les 27-29 septembre 1990	$ 2,000/90-91
3898	Sixth international conference on differentiation of normal and neoplastic cells, Vancouver, July 29 - August 2, 1990	$ 15,000/90-91
3899	5th congress of the International Society for Biomedical Research on Alcoholism, Toronto, June 17-22, 1990	$ 5,000/90-91

Travel Grants/Subventions de voyage

Total value/valeur totale: $27,733 1990-91.

3900	**BRODT, PNINA** *Surgery, McGill* Toward the cost of spending one month during the summer of 1990 with Dr. David A. Cheresh, Scripps Clinic and Research Foundation (La Jolla)	$ 2,700/90-91
3901	**HAYGLASS, KENT T.** *Immunology, Manitoba* Toward the cost of spending one month in the spring of 1991 with Dr. Anne Kelso, Walter and Eliza Hall Institute of Medical Research, Royal Melbourne Hospital	$ 5,000/90-91
3902	**JONES, BARBARA E.** **ALONSO, ANGEL** *Neurology and Neurosurgery, McGill* Toward the cost of each spending two weeks with Dr. Michel Muhlethaler, Department of Physiology, University of Geneva	$ 7,216/90-91
3903	**KAN, FREDERICK W.K.** *Anatomie, Montréal* Aide pour passer un mois (printemps 1991) auprès du Dr E. Joan Blanchette-Mackie, National Institute of Diabetes and Digestive and Kidney Diseases (Bethesda)	$ 1,650/90-91
3904	**KENNEDY, THOMAS G.** *Obstetrics and Gynecology, Western Ontario* Toward the cost of spending May 1990 with Dr. Perry F. Kraicer, Department of Zoology, Tel Aviv University	$ 1,895/90-91
3905	**POTIER, MICHEL L.** *Pédiatrie, Montréal* Aide pour passer du 1er au 15 juillet 1990 auprès du Dr Marc le Maire, Centre de génétique moléculaire, Centre national de la recherche scientifique (Gif sur Yvette, France)	$ 1,900/90-91
3906	**ROULEAU, GUY A.** *Neurology and Neurosurgery, McGill* Toward the cost of spending one week with Dr. D. Moussaoui, Centre psychiatrique universitaire Ibn Rochd, Casablanca	$ 1,600/90-91

N° de liste	Subvention/Bourse	Résumé financier
3907	**TYML, KAREL** *Medical Biophysics, Western Ontario* Toward the cost of spending three weeks in February 1991 with Dr. Stephan Nees, Physiologisches Institut der Universitat Munchen	$ 2,495/90-91
3908	**YEN, EDWIN H.K.** *Dentistry, Manitoba* Toward the cost of spending two weeks in June 1990 with Dr. Per Rygh, Faculty of Dentistry, University of Bergen	$ 3,277/90-91

General Research Grants/Subventions générales de recherche

Total value/valeur totale: $1,125,000 1990-91.

3909	Dean, Atlantic Veterinary College, Prince Edward Island	$ 10,000/89-90 10,000/90-91
3910	Dean, Faculty of Dentistry, Manitoba	$ 15,000/89-90 15,000/90-91
3911	Dean, Faculty of Medicine, Toronto	$ 50,000/89-90 50,000/90-91
3912	Doyen, Faculté de médecine vétérinaire, Montréal	$ 10,000/89-90 10,000/90-91
3913	Dean, Faculty of Medicine, Alberta	$ 50,000/89-90 50,000/90-91
3914	Director, College of Pharmacy, Dalhousie	$ 15,000/89-90 15,000/90-91
3915	Dean, Faculty of Dentistry, Dalhousie	$ 15,000/89-90 15,000/90-91
3916	Dean, Faculty of Pharmacy, Manitoba	$ 15,000/89-90 15,000/90-91
3917	Dean, Faculty of Dentistry, British Columbia	$ 15,000/89-90 15,000/90-91
3918	Directeur, Ecole de médecine dentaire, Laval	$ 15,000/89-90 15,000/90-91
3919	Dean, Faculty of Medicine, Queen's	$ 50,000/89-90 50,000/90-91
3920	Dean, Faculty of Dentistry, McGill	$ 15,000/89-90 15,000/90-91
3921	Dean, Faculty of Medicine, Dalhousie	$ 50,000/89-90 50,000/90-91
3922	Dean, Faculty of Medicine, Manitoba	$ 50,000/89-90 50,000/90-91
3923	Dean, Faculty of Health Sciences, McMaster	$ 50,000/89-90 50,000/90-91
3924	Dean, Faculty of Dentistry, Western Ontario	$ 15,000/89-90 15,000/90-91
3925	Dean, College of Pharmacy, Saskatchewan	$ 15,000/89-90 15,000/90-91
3926	Doyen, Faculté de pharmacie, Montréal	$ 15,000/89-90 15,000/90-91

Medical Research Council of Canada
Conseil de recherches médicales du Canada

List No.	Grant/Award	Financial History
3927	Director, School of Pharmacy, Memorial University of Newfoundland	$ 15,000/89-90 15,000/90-91
3928	Directeur, Ecole de pharmacie, Laval	$ 15,000/89-90 15,000/90-91
3929	Dean, Faculty of Pharmaceutical Sciences, British Columbia	$ 15,000/89-90 15,000/90-91
3930	Dean, Faculty of Dentistry, Alberta	$ 15,000/89-90 15,000/90-91
3931	Dean, Faculty of Pharmacy, Toronto	$ 15,000/89-90 15,000/90-91
3932	Doyen, Faculté de médecine, Sherbrooke	$ 50,000/89-90 50,000/90-91
3933	Dean, College of Medicine, Saskatchewan	$ 50,000/89-90 50,000/90-91
3934	Dean, Western College of Veterinary Medicine, Saskatchewan	$ 10,000/89-90 10,000/90-91
3935	Doyen, Faculté de médecine, Laval	$ 50,000/89-90 50,000/90-91
3936	Dean, Faculty of Medicine, Memorial University of Newfoundland	$ 50,000/89-90 50,000/90-91
3937	Doyen, Faculté de médecine dentaire, Montréal	$ 15,000/89-90 15,000/90-91
3938	Dean, Faculty of Medicine, Calgary	$ 50,000/89-90 50,000/90-91
3939	Dean, Faculty of Health Sciences, Ottawa	$ 50,000/89-90 50,000/90-91
3940	Dean, Faculty of Pharmacy and Pharmaceutical Sciences, Alberta	$ 15,000/89-90 15,000/90-91
3941	Dean, Faculty of Dentistry, Toronto	$ 15,000/89-90 15,000/90-91
3942	Dean, Faculty of Medicine, McGill	$ 50,000/89-90 50,000/90-91
3943	Dean, Ontario Veterinary College, Guelph	$ 10,000/89-90 10,000/90-91
3944	Dean, Faculty of Medicine, Western Ontario	$ 50,000/89-90 50,000/90-91
3945	Dean, Faculty of Medicine, British Columbia	$ 50,000/89-90 50,000/90-91
3946	Dean, College of Dentistry, Saskatchewan	$ 15,000/89-90 15,000/90-91
3947	Doyen, Faculté de médecine, Montréal	$ 50,000/89-90 50,000/90-91

Other Grants and Awards/Autres subventions et bourses

Total value/valeur totale: $767,868 1990-91.

3948	***Can. Society for Clinical Investigation (Ottawa)*** To assist in the publication of the journal "Clinical and Investigative Medicine"	$ 126,250/85-89 35,000/89-90 35,000/90-91

N° de liste	Subvention/Bourse	Résumé financier
3949	***Royal College of Physicians and Surgeons (Ottawa)*** Support for the National Council on Bioethics in Human Research *1990-91 expenditure breakdown: of the $210,000 provided for support of the Council in 1990-91, $40,000 was recovered from Health and Welfare Canada*	$ 41,500/88-89 261,464/89-90 210,000/90-91
3950	***Canadian Council on Animal Care (Ottawa)*** Support provided the Canadian Council on Animal Care concerning its control program over the care and use of animals in research	$ 469,056/89-90 500,000/90-91
3951	Towards the publication costs for the Canadian Journal of Nursing Research	$ 15,000/88-89 15,000/89-90 15,000/90-91
3952	***Youth Science Foundation (Ottawa)*** Support for the science promotional activities of the Foundation	$ 11,593/89-90 7,868/90-91

ABBOTT, FRANCES V. 0001 0002
ABBOTT, FRANK S. 0003 0004 0005 2284 2359
ABBOUD, RAJA T. 0006
ABDOLLAH, AZAD 2702
ABECASSIS, MICHAEL M.I. 2703
ABERCROMBIE, ELIZABETH D. 2947
ABRAHAMS, VIVIAN C. 0007 2271
ABRAHAMSON, E. WILLIAM 0008
ACHESON, ANN L. 2307
ACHESON, NICHOLAS H. 0009
ACHIM, ANDRE 1606
ACKERMANN, HANS W. 2121
ACKLIN-GRANT, SUSAN E. 2704
ADACHI, JONATHAN D. 0010
ADACHI, KAZUO 0011
ADAM, ALBERT 3615
ADAM, MICHAEL J. 2285 2329
ADAMEC, ROBERT E. 0012
ADAMS, JERRY M. 2726
ADAMS, MARK E. 0013
ADAMS, PAUL C. 0014
ADAMSON, IAN Y.R. 0015 0016 2122
ADAMSON, S. LEE 2263 2303
ADCHARAMOORTHY, YOGARANY 3222
ADELSTEIN, ANA 3223
AEBERSOLD, RUEDI 0017 2512
AFZAL, M. NASIR 2705
AGOSTINELLI, ENZO 3832
AGUAYO, ALBERT J. 0018 2323 2747 3178 3255
AHMED, ABDUL M. 0019 0020
AIRD, WILLIAM C. 2706
AKAI, PETER S. 2707
AKIL, HUDA 2785
AL-JOBURI, WESAM 0307
ALAIN, CLAUDE 3224
ALAVI, MISBAHUDDIN Z. 1260
ALBERT, PAUL R. 0021 2930
ALBISSER, A. MICHAEL 0022
ALBRITTON, WILLIAM L. 0023
ALDEN, LYNN E. 3291
ALI-KHAN, ZAFER 0024
ALIVISATOS, BESSIE 2297
ALKON, DANIEL L. 2772
ALLARD, JOHANE P. 0876
ALLEN, JOHN R. 0025
ALLEN, PETER S. 0026 1172 3244
ALLEN, THERESA M. 0027
ALLINGHAM-HAWKINS, DIANE J. 3225
ALMAZAN, GUILLERMINA 0028 2137
ALONSO, ANGEL 0029 3902
ALT, FREDERICK W. 2755
ALTMAN, SIDNEY 3022
AMES, BRUCE N. 3135
AMIT, ZALMAN 0030
AMMANN, HELENE 3226
AMMANN, WALTER 2285 2329
AMYOT, ROBERT 1229 1230
ANAND-SRIVASTAVA, MADHU B. 0031 0032 2462
ANANTHANARAYANAN, VETTAI S. 0033 2027 2028 2042
ANASTASSIADES, TASSOS P. 0034
ANDERSON, COLIN 0035
ANDERSON, GAIL I. 2708
ANDERSON, MARJORIE C. 3227
ANDERSON, MAURICE J. 0036
ANDERSON, PETER M. 2893
ANDERSON, ROBERT 0037
ANDERSON, W. ALAN 0038 3685
ANDERSON, WILLIAM A. 0039 2513 3158
ANDREASSEN, MERI L. 3228
ANDREW, MAUREEN E. 0040 2084
ANDREW, R. DAVID 0041 3610
ANDREWS, DAVID W. 0042 2514
ANDRULIS, IRENE L. 0043
ANGEL, AUBIE 0044
ANGEL, JOSEPH F. 0045
ANISMAN, HYMIE 0046
ANNABLE, LAWRENCE 0333 0334
ANSTIS, STUART M. 2973
ANTAKLY, TONY 0047
ANTEL, JACK P. 0048 0049 2674 2831 3062
ANTHONISEN, NICHOLAS R. 0050 2123
ANTHONY, LAWRENCE S.D. 2709
ANWAR, RASHID A. 0051
ARAGON, CARLOS G. 0030
ARANDA, JACOB V. 0052 0053 0888 2037 3826
ARAUJO, DALIA M. 2671
ARCHER, MICHAEL C. 0054 0055 3492
ARELLANO, L.-RAMIRO J. 2654
ARGUIN, MARTIN 2710 3229
ARMOUR, J. ANDREW 0056
ARMSTRONG, DAVID T. 0057 2422
ARMSTRONG, GLEN D. 0058 2207 2406
ARMSTRONG, ROBIN L. 0877 0878
ARNOLD, J. MALCOLM O. 2408
ARP, JACQUELINE 3230
ARSENAULT, A. BERTRAND 0192 3260
ARSENAULT, A. LARRY 0059
ARSENAULT, ANDRE 2343 2361
ARTHUR, GILBERT 0060 2515
ARTHUR, PETER G. 2711
ASA, SYLVIA L. 0061
ASHBY, PETER 0062
ASSELIN, CLAUDE 0063
ASTELL, CAROLINE R. 0064 3666 3674
ASTON, W. PETER 3593
ATKINS, HAROLD L. 2655
ATKINSON, STEPHANIE A. 0065
ATTARDO, DIEGO T. 3231
ATTIA, JOHN R. 3232
ATTISANO, LILIANA 2712
ATWOOD, HAROLD L. 0066 2272
AUBIN, JANE E. 2283 2344 2370 2806 3687
AUER, ROLAND N. 0067
AUERSPERG, NELLY 0068 2807
AUGER, FRANCOIS 0069
AUGUST, SHARON 3233
AULD, VANESSA J. 2713
AUSIELLO, DENNIS A. 3149
AVOLI, MASSIMO 0070 3023 3342
AWAD, SAID A. 0489
AXELRAD, ARTHUR A. 0071 2061
AXELSON, JAMES E. 0072 1594 2284 3680 3728
AYER, WILLIAM A. 2102
AYOUB, JOSEPH I.G. 2414
AZZARIA, MARIE 3234
BABINSKI, KAZIMIERZ W.S. 3235
BABIUK, LORNE A. 0073 2840 2874 3169
BACCHETTI, SILVIA 0074
BACK, DONALD W. 0075 2516 3304
BACKX, PETER H. 2672
BADR, KAMAL F. 3192
BAG, JNANANKUR 0076
BAILLIE, DAVID L. 3455
BAILLY, JANE E. 3236
BAIN, VINCENT G. 2714
BAINES, ANDREW D. 0077
BAINES, MALCOLM G. 0078
BAIRD, C. ROBERT 2381
BAIRD, PATRICIA A. 0079
BAKER, CURTIS L. 0080
BAKER, GLEN B. 0081 0397 3582
BAKER, MICHAEL A. 0082
BALA, R. MARVIN 0083
BALCH, WILLIAM E. 3031
BALDWIN, ROBERT L. 2751
BALEJA, JAMES D. 2715
BALFOUR, LOUISE C. 3237
BALL, ALEXANDER K. 0084
BALL, ERIC H. 0085 3439
BALL, RONALD O. 1403 3319
BALLANTINE, ABIGAIL C. 3238
BANCROFT, JOHN B. 3625 3714
BANDIERA, STELVIO M. 0086
BANERJEE, DIPONKAR 3182
BANVILLE, DENIS 2669
BAR-OR, ODED 3357
BARBEAU, HUGUES 0087 3264
BARBER, BRIAN H. 0088 2096 3085 3285 3514
BARD, HARRY 0089
BARDAKJIAN, BERJ L. 0090 3653

INDEX

BARDEN, NICHOLAS 0091
BARIBAULT, HELENE 2716
BARKUN, ALAN N.G. 2345
BARNES, STEVEN A. 0092 2517
BARR, JOSEPH 2656
BARR, ROBERT M. 2386
BARR, RONALD G. 0093 0486
BARSKY, VALERIE E. 3239
BARSS, PETER G. 2717
BASBAUM, ALLAN I. 2661
BASCOM, ROGER A. 3240
BASTIDA, EVA 2350
BASTIN, MARCEL F. 0094 2208
BASU, PRASANTA K. 1219 1561 1851 2423
BATES, JASON H.T. 0095 2518
BATIST, GERALD 2519
BATTISTA, JERRY J. 0562
BATTISTA, RENALDO N. 3833
BAUMAL, REUBEN 0096
BAUMEISTER, WOLFGANG 3026
BAX, ADRIAAN 2681
BAXTER, JAMES D. 1423
BAZETT-JONES, DAVID P. 0097
BEAR, CHRISTINE E. 0098
BEATO, MIGUEL 2852
BEATTIE, B. LYNN 2305
BEATTY, J. THOMAS 3211
BEAUBIEN, GUY 3241
BEAUCHAMP, DENIS 2121
BEAUCHEMIN, MICHEL L.J. 3242
BEAUCHEMIN, NICOLE 2317
BEAUCLAIR, LINDA 0333 0334
BEAUDET, ALAIN 0099 2463 3329 3726
BEAUDETTE, KATHERINE N. 3243
BEAUDOIN, ADRIEN R. 0100
BEAUDRY, PAUL 0334
BEAULIEU, ANDRE-D. 0101 0182
BEAULIEU, CHRISTIAN 3244
BEAULIEU, CHRISTINE 3245
BEAULIEU, YVES 3246
BEAUREGARD, MARIO 3247
BECHARA, ANTOINE 3248
BECK, IVAN T. 0102 0470 2940
BECKER, ALLAN B. 0103
BECKER, ANDREW J. 0104 2096
BECKER, WERNER J. 1053
BECKLAKE, MARGARET R. 0105 2424
BEDARD, MARC-ANDRE 3249
BEDARD, P.-ANDRE 0106 2520
BEDARD, PAUL J. 0107
BEFUS, A. DEAN 0108 0109 2707 2720 3051
BEGIN, RAYMOND 0110 0111
BEGIN-HEICK, NICOLE 0112 3370
BEGLEITER, ASHER 0113 0114 0891
BEHME, MARGARET T. 0514
BELANGER, ALAIN 2277
BELANGER, KARL 0899
BELANGER, LUC 0115 3112
BELANGER, PIERRE-M. 0116 0117 0118 2029
BELASCO, JOEL G. 3148
BELHUMEUR, PIERRE 2718
BELIL, JACQUES 3837
BELISLE, SERGE 0119 0120
BELIVEAU, RICHARD 0121 2030 2914 3605
BELL, DAVID A. 0122
BELL, JOHN C. 0123 2521 3350
BELL, MARY J. 0010
BELL, ROBERT M. 2980
BELL, RUSSELL A. 1488
BELLABARBA, DIEGO 0120 0124
BELLEAU, BERNARD 2194
BELLEMARE, FRANCOIS 0125
BELLIVEAU, DANIEL J. 3250
BELLWARD, GAIL D. 0126
BELSHAM, DENISE D. 3251
BENCHIMOL, SAMUEL 0127
BEND, JOHN R. 0128 3725
BENDAYAN, MOISE 0129 0130 2124 2346 2464 3330 3391
BENDELL, JAMES J. 3252
BENDER, ALEXANDER S. 2719
BENINGER, RICHARD J. 3246 3279 3299
BENISHIN, CHRISTINA G. 0131
BENNETT, BRIAN M. 0132 3536
BENNETT, GARY C. 0133 3151
BENNETT, HUGH P.J. 0134 2189
BENNETT, STEFFANY A.L. 3253
BENNICK, ANDERS 0135 2125 2135
BENOITON, N. LEO 0136 2425
BENSEN, WILLIAM G. 0010
BENTLEY, DAVID R. 2999
BENYON, R. CHRISTOPHER 2720
BENZER, SEYMOUR 2783
BERCZI, ISTVAN 2123
BERGER, THEODORE W. 2948
BERGERON, CATHERINE 1271
BERGERON, JOHN J.M. 0137
BERGERON, MARCELLE 3254
BERGERON, MICHEL 0138 2126
BERGERON, MICHEL G. 2121
BERGSAGEL, D. JOHN 2721
BERINSTEIN, NEIL L. 0139 0140 2522
BERKELAAR, J.A. MICHELLE 3255
BERNARD, LYNN E. 3256
BERNARD, NICOLE F. 1911
BERNIER, MICHEL 0141
BERNSTEIN, ALAN 0142 2347 3059
BERNSTEIN, MARK A. 0143
BERNSTEIN, VICTORIA 2408
BERRIDGE, MICHAEL J. 2700
BERRY, KENNETH 2285
BERTELOOT, ALFRED 0144 0145 2066
BERTHIAUME, YVES 0146 2523
BERTRAM, JOHN E.A. 2722
BESNER, JEAN-GUY 0147
BEST, THOMAS M. 2723
BETTERIDGE, KEITH J. 3127
BEVAN, DAVID R. 0147
BEVAN, JOHN A. 2916
BEVERIDGE, TERRANCE J. 0148 2348
BEZANSON, GREGORY S. 1156
BHAT, PANGALA V. 0149 1008
BHATNAGAR, SEEMA 3257
BHAUMICK, BANANI 0083
BHULLAR, RAJINDER P. 0150
BIANCHI FILHO, CESARIO 2724
BIBOR-HARDY, VIVIANE 0151 2110 3458
BICHET, DANIEL-G.M. 0152 2408
BIDDLE, FREDERICK G. 0153 0154
BIEDERMANN, HEINZ-J. 3678
BIEGER, DETLEF 0155 0156 3526
BIELAJEW, CATHERINE 3427
BIENENSTOCK, JOHN B. 0157 0173 2148
BIERMAN, EDWIN L. 2827
BIGGAN, SHANNAH L. 3258
BIGGS, DAVID F. 0158
BIHLER, IVAN 2426
BILAN, PHILIP J. 3259
BILLETTE, JACQUES 0159
BILODEAU, MARTIN 3260
BINIK, IRVING 3471
BIREK, CATALENA 0160 2098
BIRNBOIM, HYMAN C. 0161 3222 3253
BISBY, MARK A. 0162
BITTER-SUERMANN, HINRICH 0163
BJERKNES, MATTHEW J. 0164
BJORKLUND, ANDERS 3289
BKAILY, GHASSAN 0165 0166 0167 2031 2087
BLACK, PETER MCL. 2660
BLACK, ROBIN C. 1870
BLACK, SANDRA E. 0251
BLACK, TIMOTHY S. 3261
BLADON, TREVOR S. 2725
BLAHA, CHARLES D. 2293 2524
BLAIR, A. HUNTLEY 0659 0660
BLAISE, GILBERT A. 0168
BLAJCHMAN, MORRIS A. 2817
BLAKE, JENNIFER M. 0758 1931
BLANC, ANTONY 3262
BLANCHETOT, ALAIN D. 2209
BLAND, BRIAN H. 3332
BLASCHUK, OREST W. 0169 0170 0171
BLAY, JONATHAN 2093

BLEACKLEY, R. CHRISTOPHER 0172
BLEAU, GILLES 2286 3525
BLENDIS, LAURENCE M. 0790
BLENNERHASSETT, MICHAEL G. 0173 2525
BLIER, PIERRE 0174 2526
BLOOM, MYER 2138
BLOSTEIN, RHODA 0175 3564
BLOUIN, RICHARD 3263
BLUM, MARIANN 2907
BLUNT, ROBERT A. 3264
BOBYN, J. DENNIS 0176 2465
BOCKING, ALAN D. 2274
BODNAR, ANDREA G. 3265
BODNOFF, SHARI R. 3266
BODRUG, SHARON E. 2726
BOEGMAN, ROLAND J. 0177
BOGGS, JOAN M. 0178
BOGNAR, ANDREW L. 0179
BOILEAU, GUY 0180 0181 2289 2354 3333
BOISCLAIR, YVES R. 2727
BOISJOLY, HELENE M. 0182 0183 1588
BOISSEVAIN, MICHAEL D. 3267
BOISSINOT, MAURICE 2728
BOISSONADE, FIONA M. 2729
BOISSY, ROBERT J. 3268
BOISVERT, DONALD P.J. 0184
BOKSA, PATRICIA J. 2320
BOLDUC, CHRISTIAN 3269
BOLLER, FRANCOIS 3201
BOMAN, NANCY L. 2730
BOMBARDIER, CLAIRE 1030
BONDY, GREGORY P. 2063
BONET-KERRACHE, ARMELLE A. 2731
BONVISSUTO, ANNE C. 3270
BORDAGE, GEORGES 2339 2340
BORGEAT, PIERRE 0185 2032 2127 2349 2953
BORGFORD, THOR J. 3612
BORTOLUSSI, ROBERT A. 0186
BOSE, DEEPAK 0187 1346 2033
BOSE, RATNA 0188 1346
BOSE, RATNA D. 0189
BOTTOMLY, KIM 2810
BOUCHARD, CLAUDE 0190
BOUCHARD, JEAN-PIERRE 1844
BOUCHARD, RONALD A. 2732
BOUCHER, ANDREE 2733
BOUCHER, DANNY 3271
BOUCHER, SYLVAIN 3272
BOUDREAU, NANCY J. 3273
BOUDRIAS, PIERRE 2360
BOULANGER, YVAN 1898 3226
BOULET, LOUIS-P. 0191 2391
BOULTON, ALAN A. 2128
BOUNOUS, GUSTAVO 2427
BOURBONNAIS, DANIEL 0192 3363
BOURGAUX, PIERRE J.A. 0193 2208 3567
BOURGAUX-RAMOISY, DANIELLE L.H.G. 0193 2208
BOURNE, ROBERT B. 0575 1033 1562 2294 2386
BOURQUE, CHARLES W. 0194 2527 2868
BOUTET, MICHEL 2391
BOUTIN, JEAN-MARIE 2673
BOUTIN, YVAN 3274
BOUVIER, CLAUDIA 2734
BOUVIER, MICHEL 0195 2034 2528
BOWDEN, DRUMMOND H. 0016
BOWDEN, GEORGE H.W. 0196 3184 3847
BOWEN, C. VAUGHAN A. 0197
BOWES, KENNETH L. 0198
BOWIE, WILLIAM R. 3631
BOWLING, DOUGLAS B. 0199
BOWNESS, JOHN M. 0200
BOWSER, PAUL R. 2958
BOYD, NORMAN F. 0201 0685
BOYD, RICHARD 2871
BOYE, SANDRA M. 3275
BOYER, MICHAEL J. 2735
BOYLE, ELEANOR A. 3276
BRADLEY, ALLAN 2782
BRADLEY, DAVID E. 0202
BRADLEY, W. EDWARD C. 0203 2110 2414 3441
BRADWEJN, JACQUES 0204 0205
BRAEKEVELT, CHARLES R. 2129
BRAGG, PHILIP D. 0206 3395
BRAKIER-GINGRAS, LEA 0207 3486
BRANDL, CHRISTOPHER J. 0208
BRANSON, SUSAN M. 3277
BRANTON, PHILIP E. 0209 0210 3541
BRASH, JOHN L. 0211
BRASSEUR, NICOLE M. 2736
BRAUN, PETER E. 0212
BRAWER, JAMES R. 0213
BRAY, GARTH M. 0018 3255
BRAYER, GARY D. 0214 0215 3503 3510 3565
BRAZEAU, PAUL 3047
BRECKENRIDGE, W. CARL 0216 2210
BREITMAN, MARTIN L. 0217 0218 2466 2692
BREM, STEVEN 0219 0920
BRENAN, COLIN J.H. 3744
BRENNER, BARRY M. 2954
BRESSLER, BERNARD H. 0220
BRETSCHER, PETER A. 0221
BRIDGE, PETER J. 0507 3717
BRIDGER, WILLIAM A. 0222
BRIDGES, KENNETH R. 2912
BRIDGES, MICHAEL A. 2379
BRIEDIS, DALIUS J. 0223
BRIEN, JAMES F. 0224
BRIEN, NORMAND 2360
BRINDLEY, DAVID N. 0225
BRIONES-URBINA, ROSARIO 2737
BRISSETTE, LOUISE 0226
BRISSON, NORMAND 0227 3664
BRITTON, ANN P. 2738
BROCHU, SYLVIE 3278
BROCKHAUSEN, INKA H. 0228
BROCKWELL, NEIL T. 3279
BRODER, IRVIN 2428
BRODEUR, BERNARD R. 3606 3673
BRODEUR, JULES 0229 0230
BRODT, PNINA 0231 3900
BRONSKILL, MICHAEL J. 0232 1432
BROOKS, DONALD E. 0233
BROSNAN, JOHN T. 0234
BROSNAN, MARGARET E. 0235
BROUGHTON, ROGER J. 0236 2429 3562
BROUSSEAU, ROLAND 3369
BROWMAN, HOWARD I. 2739
BROWN, ARTHUR 3280
BROWN, CHRISTOPHER B. 2740
BROWN, DAVID L. 0237
BROWN, ERIN E. 3281
BROWN, GARRY 2665
BROWN, GREGORY M. 0238 0358 0885 2115
BROWN, IAN R. 0239
BROWN, JOHN C. 2273 3142 3214 3558 3693
BROWN, MARTHA 0240
BROWN, MURRAY G. 2381
BROWNSEY, ROGER W. 0241
BROWNSTONE, ROBERT M. 2741
BRUBAKER, PATRICIA L. 0242
BRUCHOVSKY, NICHOLAS 0243 1517
BRUNDAGE, KRISTY L. 3282
BRUNENGRABER, HENRI 0244 1490 2141 2211 2979
BRUNET, DONALD G. 0974
BRUNETTE, DONALD M. 0245 2130 3183
BRUNETTE, JEAN REAL 0246
BRUNHAM, ROBERT C. 1208 2131 2335
BRUNTON, JAMES L. 0247 2301 3198
BRYAN, A. CHARLES 0248 2654
BRYAN, LAWRENCE E. 0249 2908
BRYAN, M. HEATHER 0248
BRYANT, J. TIMOTHY 1993 2321
BRYDEN, KATHLEEN E. 3283
BRYSON, SUSAN E. 3659
BUB, DANIEL N. 0250 0251 2302 2710
BUCHAN, ALISON M.J. 2273 3316
BUCHANAN, BRUCE G. 2794
BUCHANAN, MICHAEL R. 0812 1351 2084 2350 3690

INDEX

BUCHWALD, MANUEL 0252 3101
BUDNEY, DAVID R. 1265
BUICK, RONALD N. 0253 3175 3498
BUKOWIECKI, LUDWIK J. 0254 2191
BULLOCH, ANDREW G.M. 0255 0256
BUNTING, PETER S. 1851
BURCZYNSKI, FRANK J. 2742
BUREAU, MICHEL A. 0257
BURGESS, ARTHUR E. 0258
BURKA, JOHN F. 1384
BURKE, DAVID L. 0020
BURKE, ROBERT D. 0259 2107
BURKHOLDER, GARY D. 2132
BURNESS, ALFRED T.H. 0260
BURNS, ALAN R. 3284
BURNS, KEVIN D. 2743
BURNSTOCK, GEOFFREY 2855
BURSHTYN, DEBORAH N. 3285
BURT, HELEN M. 0261
BUSHNELL, M. CATHERINE 0262 0508 0509 2212
BUSTAMANTE, J. OMAR 2310
BUTLER, MICHELLE P. 3286
BUTTERWORTH, ROGER F. 0263 0264 0265 2298 2351 3254 3394 3434 3484
BYERS, DAVID M. 0266 2288 2529
C.-GAUDREAULT, RENE 2400 3579
CADIEUX, ALAIN 2316
CAILLE, GILLES 0499 3272
CAIRNEY, A. ELIZABETH L. 0983
CAIRNS, JOHN A. 0381 2352
CAIRNS, SHARON L. 3287
CALARESU, FRANCO R. 0267
CALLAHAN, JOHN W. 0268 0355
CALNE, DONALD B. 2285 2329
CALVERT, RAYMOND 0269 2133
CAMBIER, JOHN C. 2775
CAMERMAN, NORMAN 0270 0271
CAMPBELL, A. PATRICIA 3288
CAMPBELL, CHRISTINE E. 1961 2530
CAMPBELL, E.J. MORAN 0955
CAMPBELL, JAMES N. 2784
CAMPBELL, KENNETH J. 3289
CAMPBELL, ROBERT M. 2744
CAMPENOT, ROBERT B. 2307
CAMPLING, BARBARA G. 0272 0273
CAMPOS, ROBERT V. 3187
CANDIDO, E. PETER M. 0274 3268
CANTIN, ANDRE 0110 0111 0275
CANTIN, BERNARD 3290
CAPADAY, CHARLES 2745
CAPECCHI, MARIO R. 3045
CAPEK, RADAN 0276
CAPONE, JOHN P. 0277
CAPREOL, MARTHA J. 3291
CARAYANNIOTIS, GEORGE 2213 2885
CARBONETTO, SALVATORE T. 0278 0279 3154 3339 3557
CARDINAL, JEAN 0280
CARDINAL, RENE 1578 2311
CARERE, RONALD G. 3188
CARETTE, SIMON 0281
CAREY, DAVID P. 3292
CARLEN, PETER L. 0282 2272 3174 3689
CARLSON, JOHN C. 0283
CARMICHAEL, FREDERICK J. 0284
CARMICHAEL, JOHN A. 1510
CARMICHAEL, ROBERT P. 2746
CARNEGIE, JACQUELINE A. 0285
CARON, MARC G. 2861 2878 3113
CARPENITO, CARMINE 3293
CARR, IAN A. 2123
CARR, PATRICK A. 3294
CARRIERE, SERGE 0286
CARROLL, KENNETH K. 0287 2430
CARSON, JEFFREY J.L. 3295
CARSTENS, ERIC B. 0288
CARTER, DAVID A. 2747
CARTER, RONALD F. 2748
CARTIER, ANDRE 2391
CARVALHO, ROBERTO S. 2749
CARVER, JEREMY P. 0289 2096 2134 2135
CASANOVA, CHRISTIAN F.P. 0290
CASE, BRUCE W. 0291
CASEY, JOSEPH R. 3296
CASHMAN, NEIL R. 2921 3588
CASPER, ROBERT F.J. 0292
CASS, CAROL E. 1389 2179 3464
CASSON, ALAN G. 2750
CASTELLUCCI, VINCENT F. 0293 3089
CASTONGUAY, ANDRE 0294
CATES, GEORGE A. 0295 2531 3709
CATTERALL, WILLIAM A. 2988
CATTINI, PETER A. 0296 0297 2532 2994 3566
CAVALIER-SMITH, THOMAS 0298
CAVANAGH, PATRICK 3229
CAVENEE, WEBSTER C. 2975 3116
CAVERSON, MONICA M. 0299 2035
CECHETTO, DAVID F. 0737
CEDERGREN, ROBERT J. 0300 3300
CERNACEK, PETER 1768
CHABOT, BENOIT 0301 2208 2533
CHACONAS, GEORGE 0302 2467
CHADEE, KHRISENDATH 0303 3704
CHAKRABARTI, SAROJ K. 0304
CHAKRABARTTY, AVIJIT 2751
CHALLIS, JOHN R.G. 2274
CHALY, NATHALIE 0237
CHAMBERS, ANN F. 0772 3120
CHAMBON, PIERRE 2931 3172
CHAMPAGNE, MARIE-JOSEE 2752
CHAN, AGNES H.-C. 2753
CHAN, ALVIN C. 0305
CHAN, BOSCO M.C. 2754
CHAN, CATHERINE B. 0306
CHAN, EDDIE C.S. 0307
CHAN, JOHN Y.C. 0308
CHAN, K.-H. CASEY 0019
CHAN, PETER T.K. 3297
CHAN, VOON-LOONG 0309
CHAN, WILLIAM W.-C. 0310
CHANG, PATRICIA L.-Y. 0311
CHANG, THOMAS M.S. 0312 2431
CHANT, JOHN S. 3740
CHAPDELAINE, ALCIDE 0313 2286
CHAPLER, CHRISTOPHER K. 0314 3715
CHAPLIN, DAVID J. 0315 0316 1724
CHAPMAN, C. ELAINE 0317
CHAPMAN, GWENNETH E. 3298
CHARBONNEAU, DANIELLE 3299
CHARBONNEAU, MICHEL 0318
CHARETTE, PAUL 3745 3846
CHARLTON, KENNETH M. 3087
CHARLTON, MILTON P. 0319 2272 2468 3054
CHARRON, JEAN 2755
CHARTRAND, PASCAL 3300
CHARTRAND, PIERRE 0320 3326 3608 3618
CHAYE, HELENA H. 3209
CHEESEMAN, CHRISTOPHER I. 0321 0322
CHEN, BEIYUN 2756
CHEN, JIN-KUN 3179
CHEN, SUIRONG (WING) 2757
CHEN, YOUHAI 2758
CHENG, HAZEL 0323
CHENG, HEUNG-CHIN 2759
CHENG, PEI-TAK 0324
CHERIAN, GEORGE M. 0325 0983
CHERNICK, VICTOR 0326
CHERTKOW, HOWARD M. 0250 0327 2534
CHESSEX, PHILIPPE 2353
CHEUNG, DONALD W. 0328 0329
CHEUNG, ELSIE Y.Y. 3301
CHEVALIER, SIMONE 2286
CHIASSON, JEAN-LOUIS 0330 2198
CHIK, CONSTANCE L.-Y. 0331
CHILDS, TIMOTHY J. 3302
CHIN, WILLIAM W. 2888
CHINARD, FRANCIS P. 3810
CHIU, EDWARD K.Y. 3189
CHIU, RAY C.J. 0332
CHOUINARD, GUY 0333 0334

CHOW, ALBERT H.L. 0335
CHOW, ANTHONY W. 0336 3639
CHOW, BILLY K.-C. 3303
CHOW, DONNA A. 0337 2123 3681
CHOW, LAWRENCE H. 0338 2760
CHOY, PATRICK C. 0339 0340 3542
CHRETIEN, MICHEL 2275 2314
CHRISTOFI, FEDIAS L. 2761
CHRISTOU, NICOLAS V. 2287
CHUI, DAVID H.K. 0341 2084
CHUNG, STEPHEN W. 2762
CHURCH, JOHN 0342
CHURCH, JON G. 0343
CHURG, ANDREW M. 0344 0345 2136
CIAMPI, ANTONIO 0346
CIRIELLO, JOHN 0347 3444
CIVELLI, OLIVIER 2734
CLANACHAN, ALEXANDER S. 0348
CLANDININ, M. THOMAS 0349
CLARK, ALBERT F. 0350
CLARK, CAMPBELL M. 2023 2285 2329 3276
CLARK, DAVID A. 0351 2148
CLARK, DENISE V. 2763
CLARK, MICHAEL W. 2718
CLARK-LEWIS, IAN 0352 2535 3361
CLARKE, ANTHONY J. 0353
CLARKE, HUGH J. 0354
CLARKE, IAN D. 3304
CLARKE, JOE T.R. 0355
CLARKE, MICHAEL W. 0356 2309 3553
CLARKE, PAUL B.S. 0357
CLEARY, MICHAEL L. 2694
CLEGG, JAMES S. 3050
CLEGG, NIGEL J.M. 3210
CLEGHORN, JOHN M. 0358 2927
CLEMENTS, JOHN C. 0834
CLERMONT, YVES W. 0359
CLEZARDIN, PHILIPPE 3827
CLIVE, DERRICK L.J. 2102
COATES, GEOFFREY 0360
COBBOLD, RICHARD S.C. 0892 2036
COCEANI, FLAVIO 0361
COCKFIELD, SANDRA M. 0362 2764
COCKSHUTT, AMANDA M. 3305
CODDING, PENELOPE W. 0363
CODERRE, TERENCE J. 2536
COHEN, AMOS 0364 2169
COHEN, MONROE W. 0365
COHEN, ZANE 0366 2900
COLE, DAVID E.C. 0367
COLE, SUSAN P.C. 0368 2162 2943
COLE, WILLIAM C. 0369 2537
COLLE, ELEANOR 0370 2295 2296
COLLIER, BRIAN 0371 2137 3848
COLLINGE, JUDITH M. 0888
COLLINS, STEPHEN M. 0372 0373 2667
COLLU, ROBERT 0374 0375
COLMERS, WILLIAM F. 0376 3468
CONGOTE, L. FERNANDO 0377 2189
CONLON, JENNIFER A. 2765
CONLON, RONALD A. 2766
CONLY, JOHN M. 0378
CONNELL, GREGORY J. 2767
CONNELLY, PHILIP W. 0379
CONNOLLY, STUART J. 0380 0381 2352
CONNORS, GREGORY T. 2768
CONSTABLE, R. TODD 3306
CONWAY, BRIAN 2769
COOK, HAROLD W. 2288
COOK, MICHAEL A. 0382
COOKE, ROBERT G. 1923
COOKE, T. DEREK V. 1993 2202 2321 2399
COOPER, BERNARD A. 2432
COOPER, ELLIS J. 0383 0384 3537
COOPER, KEITH E. 1892
COOPER, MAX D. 2983
COORSSEN, JENS R. 3307
COPELAND, KENNETH R. 3308
COPP, D. HAROLD 0385
CORBETT, DALE R. 0386
COREN, STANLEY 0387
CORMIER, YVON 0388
CORNELL, ROSEMARY B. 3456
CORNIL, ISABELLE S. 2770
CORRY, ROBERT J. 2703
CORTER, CARL M. 0581
COSCINA, DONALD V. 0583 0807
COSIO, MANUEL G. 0389
COSTELLO, CHARLES G. 3343
COSTERTON, J. WILLIAM 0390
COTE, AURORE 0391 2037
COTE, GRAHAM P. 0392
COTE, HELENE 3309
COTE, JACQUES J. 3310
COTE, JOHANNE 2391
COTE, MICHEL G. 0304
COTE, SERGE 3600
COTMAN, CARL W. 2671
COTTON, DAVID J. 0393
COULDWELL, WILLIAM T. 2674
COULOMBE, BENOIT 2771
COULOMBE, PIERRE A. 2675
COULOMBE, RAYMOND 3311
COULTER-MACKIE, MARION B. 0394
COULTON, JAMES W. 0395
COURNEYA, CAROL-ANN M. 0396
COUTTS, RONALD T. 0081 0397 1800 1801
COUTURE, REJEAN 0398
COX, BRIAN J. 3312
COX, DAVID N. 3344
COX, DIANE W. 0399
COX, TERRY A. 0400
CRAIG, ANN MARIE 2772
CRAIG, IAN 2665
CRAIG, KENNETH D. 3277 3420
CRAIG, WILLIAM H. 3313
CRANKSHAW, DENIS J. 0401
CRAPO, JAMES D. 3133
CRAWFORD, J. DOUGLAS 3314
CRIBB, ALASTAIR E. 2773
CRIDLAND, RUTH A. 2774
CRINE, PHILIPPE J. 0402 2171 2289 2354 3481
CROCKER, JOHN F.S. 0403 1300 2355
CROMLISH, JAMES A. 0404 2538
CROSA, JORGE H. 3046
CROSS, DAVID P. 2775
CROSS, JAMES C. 2776
CROWNE, DOUGLAS P. 3223
CRUESS, ALAN F. 0405
CRUZ, TONY F. 0406 1462
CUDDY, T. EDWARD 2408
CUELLO, A. CLAUDIO G. 0407 0408 2038 2137 3027
CULLIS, PIETER R. 0409 0458 2138 2730 2913
CULOTTI, JOSEPH G. 0410
CUNNINGHAM, ALASTAIR J. 0411
CUNNINGHAM, IAN A. 0412 0561 1597 3616
CUNNINGHAM, JOHN A. 3315
CUPPLES, WILLIAM A. 0413
CURRAN, TOM 3164
CURRY, KENNETH 0414 2539
CURTIS, SUSAN B. 3316
CUSSON, JEAN R. 2644
CUTZ, ERNEST 2315
CYBULSKY, ANDREY V. 0415 2540
CYBULSKY, MYRON I. 2777
CYNADER, MAX S. 0416 2290 2821 3669
CYR, DANIEL G. 3190
D'AMOUR, PIERRE 0417 0418
D'ARCY, K. CARL R. 3552
DAGENAIS, ANDRE 2778
DAGENAIS, GILLES R. 2408
DAKSHINAMURTI, KRISHNAMURTI 0419 0420 2039
DALES, SAMUEL 0421
DALEY, M. DENISE 2779
DALY, PAUL A. 2408
DANDOIS, MAXIME G. 3317
DANIEL, EDWIN E. 0422 2040 2291 2667 2933 3849
DANIEL, SUSAN A.J. 0057
DANIELS, JONATHAN M. 3318
DAO, T.T. THUAN 3180

INDEX

DARLING, PAULINE B 3319
DASTOOR, FARAHAD 3211
DAUDI, FAIZ A 2780
DAVID, JEAN-CLAUDE 3828
DAVID, SAMUEL 0423 2541
DAVIDSON, NITA W 3538
DAVIE, JAMES R 0424 0425 2542
DAVIES, JOHN E 2098 2308 2708
DAVIES, MARTIN 3320
DAVIES, PETER L 0426
DAVIES, PHILIP O 2781
DAVIES, R. WAYNE 2347
DAVIES, RICHARD F 2410
DAVIGNON, JEAN 0427 2198 2356
DAVIS, ANN C 2782
DAVIS, CAROLINE 3419
DAVIS, CLAYTUS A 2783 3321
DAVIS, KAREN D 2784
DAVIS, PHILIP J 0428
DAVISON, JOSEPH S 0429
DAWES, COLIN 0430
DAWSON, CAROLYN 3506
DAWSON, DEAN 3366
DAY, JAMIE C 3322
DAY, ROBERT A 2785
DE BOLD, ADOLFO J 0431
DE BRUM FERNANDES, ARTUR J 2786
DE CHAMPLAIN, JACQUES 0432 2408 3556
DE CROMBRUGGHE, BENOIT 2841
DE HARVEN, ETIENNE P 2139
DE LAUNOIT, YVAN-P 2787
DE LEAN, ANDRE 0433 1347 2083 2194 2275 2292 2469 3235 3483 3623
DE MEDICIS, RINALDO 1112
DE MONTIGNY, CLAUDE 0434
DE REPENTIGNY, LOUIS 0435
DEAL, CHERI L 2788
DEATHE, A. BARRY 1969
DEBANNE, MARIA T 0436
DEBER, CHARLES M 0437 2099 2135 2140
DEBINSKI, WALDEMAR K 2789
DECK, JOHN H.N 1271
DEELEY, ROGER G 0368 0438 2214 2943 3213 3218 3629
DEKABAN, GREGORY A 0439 2309 3230
DEL CAMPO, J.C. MARTIN 1429
DEL MAESTRO, ROLANDO F 2387
DELAGE, ROBERT 2790
DELANEY, KERRY R 2791
DELANGE, A.M. LUKE 0440 2543
DELBAERE, LOUIS T.J 0441
DELESPESSE, GUY J.T 0442 2215 3371
DELIKATNY, E. JAMES 2792
DELLING, ULRIKE 3323
DELONG, MAHLON R 3088
DELONGIS, ANITA M 3576 3587
DELOVITCH, TERRY L 0443 0444
DEMBO, ALON J 0140
DEMCZUK, SUZANNE 3324
DEMERS, SYLVIE I 3325
DENBURG, JUDAH A 0445 0476 2148 3157
DENHARDT, DAVID T 3741
DENNIS, JAMES W 0446 2135 3431
DENNIS, MICHAEL J 0447
DENNIS, PATRICK P 0448
DENNIS, TREVOR 0449
DEPEW, WILLIAM T 1791
DEPORTER, DOUGLAS A 2308
DER, JOHN E 2793
DEREWENDA, ZYGMUNT S 2276
DEROTH, LASZLO 2798
DES ROSIERS, CHRISTINE 0450 1490 2141
DESAUTELS, LYNE 3326
DESAUTELS, MICHEL 0451
DESBARATS, LAURIE A 3327
DESCARRIES, LAURENT 0452 2126 3247 3530
DESCHAMPS, BENOIT J 3328
DESCHENES, MARTIN 0453
DESGROSEILLERS, LUC 0454 2289 2544
DESILETS, MICHEL 0455 1005
DESJARDINS, BENOIT 2794
DESJARDINS, G. CLARISSA 3329
DESJARDINS, MICHEL 3330
DESLAURIERS, NOELLA 0456 2191 3269
DESLAURIERS, ROXANNE M 3100
DESMARAIS, DANIELLE 3331
DESMARAIS, GILBERT 3532
DESPRES, JEAN-PIERRE 0190 3290
DEVAULT, ALAIN 2795
DEVAY, ATTILA 3839
DEVINE, DANA V 0457 0458 3261
DEVREOTES, PETER N 2976
DHALLA, NARANJAN S 0459 2705 3103
DHILLON, MOHAN 2162
DI PAOLO, THERESE M.P.L 0460 3379 3497
DIAMANDIS, ELEFTHERIOS P 2357
DIAMANT, NICHOLAS E 0461 2291 3203
DIAMOND, JACK (British Columbia) 2858 3519
DIAMOND, JACK (McMaster) 0462 3128
DIAZ-MITOMA, FRANCISCO J 2335
DICHGANS, J 3123
DICK, JOHN E 0463 2169
DICK, TERRY A 2123
DICKSON, CLAYTON T 3332
DICKSON, D. HOWARD 0464
DICOSMO, FRANK 0465
DIEWERT, VIRGINIA M 0466
DIKSIC, MIRKO 0467 1998 2142 2297 2421
DIMATTIA, GABRIEL E 2796
DIMMOCK, JONATHAN R 0468
DIMOCK, KENNETH D 0469
DINDA, PARITOSH K 0102 0470
DION, NATALIE 3333
DIONNE, FRANCE T 0190
DIONNE, NATALIE D 3334
DITTO, W. BLAINE, JR 0471 1235 3373
DIXON, GORDON H 0472
DIXON, IAN M.C 2797
DIXON, S. JEFFREY 0473 0474 2216
DOANE, FRANCES W 2143
DOBBS, ALLEN R 3227
DOBROVOLNY, MARY ANNE 3335
DODD, JANICE G 2545
DODEK, PETER M 2085
DOERSCHUK, CLAIRE M 0823 209[illegible]
DOHERTY, PAUL J 2169
DOILLON, CHARLES J 0475 2366
DOIZE, FRANCOISE A.C.R 2798
DOLL, CHRISTOPHER J 3336
DOLOVICH, JERRY 0476 2148 3157
DOLPHIN, ANNETTE 3105
DOLPHIN, PETER J 0477
DONATI, FRANCOIS 0147
DONOHUE, WILLIAM B 2360
DOOLITTLE, W. FORD 0478 3636
DORE, MONIQUE 2799
DOREE, MARCEL 2795
DORIAN, PAUL 2645
DOROVINI-ZIS, KATERINA 0479
DORRINGTON, JENNIFER H 0480 3252
DORRINGTON, KEITH J 0967
DORSCHEID, DELBERT R 3337
DOSCH, HANS-MICHAEL 0481 2169
DOSSETOR, JOHN B 2433
DOSTROVSKY, JONATHAN O 0482
DOUCET, GUY 0483 2126
DOUCETTE, J. RONALD 0484
DOUGLAS, JENNIFER R 3338
DOUGLAS, ROBERT M 0485
DOUGLAS, VIRGINIA I 0486 3603
DOUVILLE, PHILIPPE J 3339
DOUVILLE, YVAN 0725 2365 2366
DOWNEY, GREGORY P 0487
DOWNIE, JOHN W 0488 0489 2217
DOYLE, JOHN J 0490
DOYON, JEAN 3340
DOYON, LOUISE 3341
DRABER, PETER 3840

DRANCE, STEPHEN M. 0491
DRAPEAU, CHRISTIAN 3342
DRAPEAU, GABRIEL R. 0492 3369 3390
DRAPEAU, PIERRE 0493 2041 2546 3544
DREW, MARY L. 3343
DREW, TREVOR B. 0494
DRIEDGER, SUSAN M. 3344
DRIJBER, F.L.I. PHILIP 3345
DROST, DICK J. 1453
DROUIN, JACQUES 0495 0496 2081 2198 2292 2470 2992 3677
DROUIN, REGEN 2800
DRUCKER, DANIEL J. 0497 0498 3187
DU SOUICH, PATRICK P. 0499 0500 1229 1230 3621
DUAN, JIANMIN 2801
DUBE, IAN D. 0501 0502 2748
DUBE, JEAN Y. 1847 3387
DUBE, LUC 3346
DUBIK, DONALD 3347
DUBOW, MICHAEL S. 0503
DUBREUIL, MARTINE D. 3348
DUBUC, REJEAN 0504 2547
DUERDEN, JACQUELINE C. 3349
DUFF, HENRY J. 2322
DUFFIN, JAMES 0505
DUFY, BERNARD 2937
DUGAS, MARIO 2391
DULHANTY, ANN M. 3191
DUMAS, JEAN E. 0506
DUMONT, LOUIS 3648
DUNCAN, ALESSANDRA M.V. 0507
DUNCAN, CLIVE P. 2386
DUNCAN, GARY H. 0262 0508 0509 2218
DUNCAN, PETER I. 3350
DUNCAN, RUTH 3155
DUNCAN-HEWITT, WENDY C. 0510
DUNHAM, PHILIP J. 3448
DUNN, ROBERT J. 0511 0512 2803 2850 3232
DUNN, STANLEY D. 0513 3652
DUPRE, JOHN 0514
DUPUIS, GILLES 1398 2087
DURANCEAU, ANDRE C.H. 1230
DURAND, LOUIS-GILLES 0515 1025
DURAND, RALPH E. 0316 0516 2144
DURDEN, DAVID A. 2128
DURIE, PETER R. 0517
DURKIN, JON P. 0604
DUSSAULT, JEAN H. 0518 2319
DUTZ, JAN P. 2802
DYCK, DENNIS G. 3403
DYCK, J. BARRY 2657
DYER, JOHN R. 2803
DYKES, ROBERT W. 0519 3706
EASTERBROOK, KENNETH B. 2146
EASTON, PAUL A. 0520 2548
EAVES, CONNIE J. 0521 3121
EBERS, GEORGE C. 0843 1335
EBISUZAKI, KANEY 0522
ECHELARD, YANN 2804
EDDY, ALLISON A. 0523
EDELMAN, GERALD M. 2904
EDELSON, JEFFREY D. 0524
EDERY, ISAAC 2805
EDMONDS, CLAIRE V.I. 3351
EDMONDS, DIANE E. 3352
EDWARDS, DYLAN R.W. 0525 0526
EDWARDS, MARIE P. 3353
EIDELMAN, FRANK J. 2658
EIKELBOOM, ROELOF 3246
EISEN, ANDREW A. 2285 2329 3021
EISEN, HERMAN N. 2802
EIZENMAN, MOSHE 0527 0528
EKKER, MARC 2676
ELCE, JOHN S. 0529
ELHILALI, MOSTAFA M. 0964
ELINSON, RICHARD P. 0530
ELLEN, RICHARD P. 0531 2098
ELLIES, LESLEY G. 2806
ELLIOTT, BRUCE E. 0532 2162
ELLIOTT, JOHN F. 0533 2549
ELLIOTT, W. MARK 2807
ELLIS, JAMES R. 2808
ELLISON, KIMBERLY S. 2809
ELLISON, MICHAEL J. 0534 2550
ELSHOLTZ, HARRY P. 0535 2551
ENDICOTT, JANE A. 3354
ENDLER, NORMAN S. 3312
ENDRENYI, LASZLO 0536
ENGLISH, MICHAEL J.M. 0002
EPAND, RICHARD M. 0537 2042 2084
EPPIG, JOHN J. 3129
EPSTEIN, MICHELLE M. 2810
ERNST, PETER B. 0157 0538 2148
ERNST, PIERRE-P. 0105
ESCHER, EMANUEL 0120 0539 2043 3594
ESDAILE, JOHN M. 2358
ESPLIN, BARBARA 0276
ETHIER, C. ROSS 0540
ETHIER, CHANTAL 3355
ETTENGER, ROBERT B. 2848
ETTENSON, DAVID S. 3356
EVANS, ALAN C. 0250 2145 2297
EVANS, DAVID H. 0541
EVANS, EVAN A. 0542
EVANS, JANE A. 0543
EVANS, PETER J. 2811
EVERED, MARK D. 0544
EVERTS, VINCENT 3850
FAIMAN, CHARLES 0545
FALARDEAU, PIERRE 0546
FALCONER, MARCIA M. 2812
FALK, BAREKET 3357
FALK, RUDOLF E. 2434
FALKOW, STANLEY 2662
FAMIGLIETTI, EDWARD V. 0547
FAN, PING 2813
FANTUS, I. GEORGE 0548 2088 2402 3462
FARBER, EMMANUEL 0549
FAREWELL, VERNON T. 0672
FARID, NADIR R. 2885
FARINHA, MARK A. 3358
FAROOKHI, RIAZ 0550
FARRELL, CATHERINE L. 2814
FARRELL, KEVIN 0003 2284 2359
FARRELL, NICHOLAS P. 1724
FAUCHER, DANIEL J. 0888
FAULKNER, GARY T. 1056 2146
FAULKNER, PETER 0551 0552 2435 3221
FAURE, NACIA 0553 1064
FAUST, EMANUEL A. 0554
FEAGAN, BRIAN G. 2386 2392
FEASBY, THOMAS E. 0555
FEATHERSTONE, MARK S. 0556 2552
FEAVER, W. JOHN 3359
FEDERICO, PAOLO 3360
FEDERSPPIEL, BARTOLOME S. 3361
FEDORAK, RICHARD N. 0557 3002
FEDORKO, LUDWIK M. 0558 2303 2553
FEDOROFF, SERGEY 0559 3834
FEENY, DAVID H. 1033
FEIFEL, DAVID 3362
FEIGENBAUM, ANNETTE S.J. 2815
FEINE, JOCELYNE S. 2360
FEKKEN, G. CYNTHIA 3414
FELDMAN, ROSS D. 0560
FENG, GEN-SHENG 2816
FENSTER, AARON 0412 0561 0562 1597 3616
FENTRESS, JOHN C. 0563
FERAMISCO, JAMES R. 3139
FERGUSON, ALASTAIR V. 0564 3435
FERGUSON, HUGH W. 2935
FERGUSON, JOHN 2410
FERNANDEZ-RACHUBINSKI, FRANCOISE 2817
FERNIE, GEOFFREY R. 1138
FERRIER, GREGORY R. 0565 0566 2854
FERRIER, JACK M. 2283 2370
FERRON, ANDRE 3247
FETZ, EBERHARD E. 2745 2825

INDEX

FEWELL, JAMES E. 0567 2471
FIBIGER, H. CHRISTIAN 0568 2293 3053 3281 3322
FIELD, CATHERINE J. 2818
FIELD, L. LEIGH 0569
FILEP, JANOS G. 2819
FILIATRAULT, JOHANNE 3363
FILION, MICHEL 0107
FILLERY, EDWARD D. 0570
FILTEAU, SUZANNE M. 2820
FINDLAY, JOHN 3081
FINE, ALAN 0571
FINE, SHELDON 1460
FINEGAN, BARRY A. 0348
FINEGAN, JO-ANNE K. 0572
FINEGOOD, DIANE T. 0573 2044
FINLAY, B. BRETT 0574
FINLAY, J. BRYAN 0575 1562 2294 3345
FINLAYSON, PAUL G. 2821
FINNEGAN, MAUREEN A. 1870
FIRNAU, GUNTER B. 0360 0642
FISCHER, DANNY B. 3192
FISH, ELEANOR N. 0576
FISHELL, GORDON J. 2822
FISHER, JOHN T. 0577 2219 3282 3699
FISHER, MURRAY M. 0578
FISHMAN, MARK C. 2702
FITZPATRICK, DANIAL V. 3364
FIUME, EUGENE L. 3535
FLAMAND, J.M. LOUIS 3365
FLANAGAN, JOHN G. 0579 0580
FLATTERS, MICHELE I. 3366
FLEMING, ALISON S. 0581
FLEMING, NORMAN 0582
FLETCHER, ELIZABETH J. 2823
FLETCHER, PAUL J. 0583
FLETCHER, WILLIAM A. 0584
FLIEGEL, LARRY 0585
FLINTOFF, WAYNE F. 0586
FLISS, HENRY 0587
FLORAS, JOHN S. 0588
FLOWERS, MICHELE A. 3193
FLUMERFELT, BRIAN A. 0589 2147
FLYNN, T. GEOFFREY 0590 0591 0592 3709
FOERSTER, ANNE P. 0593
FOGAL, DENISE R. 3367
FOLDES, EVA 2824
FOLKMAN, M. JUDAH 2969
FONTAINE, REJEAN 0334
FORBES, DOUGLASS J. 2939
FORBES, ROBERT D.C. 0594
FORD, CHRISTOPHER H.J. 1526
FORD, LINCOLN E. 3073
FORD-HUTCHINSON, ANTHONY W. 2371
FOREST, JEAN-CLAUDE 1285
FORSDYKE, DONALD R. 0595
FORSTNER, GORDON G. 0596
FORSTNER, JANET F. 0596
FORTE, MICHAEL A. 3041
FORTH, ADELLE E. 3368
FORTIER, PIERRE A. 2825
FORTIN, YVES 3369
FOSTER, F. STUART 0597 3504
FOTEDAR, ARUN 0598
FOURNIER, ALAIN 2045 2316
FOURNIER, LINDA A. 3370
FOURNIER, SUSAN 2826
FOURNIER, SYLVIE 3371
FOURON, JEAN-CLAUDE 0599
FOX, ALLAN J. 0600
FOX, JO-ANN E.T. 2291
FRADET, CHRISTIANE 3372
FRADET, YVES 2070 2472
FRAHER, LAURENCE J. 0601
FRANCE, CHRISTOPHER 3373
FRANCIS, GORDON A. 2827
FRANK, CYRIL B. 0602
FRANK, GEORGE B. 0603
FRANKLIN, KEITH B.J. 0002
FRANKS, DOUGLAS J. 0604 0605
FRAPPELL, PETER B. 2828
FRAPPIER, LORI D. 2829
FRASER, BARBARA M. 3212
FRASER, CHERYL M. 3374
FRASER, F. CLARKE 2280
FRASER, MURRAY J. 0606
FRASER, PAUL E. 2830
FRASER, WILLIAM D. 0607 2220
FREDERICKSON, ROBERT M. 3375
FREDHOLM, BERTIL B. 3202
FREEDMAN, MARK S. 2831
FREEMAN, DAVID J.P. 0608
FREEMAN, HUGH J. 0609
FREEMAN, KARL B. 0610 3449
FREEMAN, RICHARD J. 3374
FREESTON, MARK H. 3376
FRENCH, ANDREW S. 0611
FRENCH, ROBERT J. 0612
FRENETTE, MICHEL 0753 3380
FRIED, GERALD M. 2345
FRIED, MICHAEL 2837
FRIEDMAN, SYDNEY M. 0613
FRIEND, STEPHEN H. 2945
FRIEND, WILLIAM C. 2677
FRIESEN, HENRY G. 0614 0615 2330
FRIESEN, JAMES D. 0616 3166 3575
FRITZ, IRVING B. 0617
FRITZLER, MARVIN J. 0618 0619
FROESE, ALISON B. 0620 3282
FROESE, ARNOLD 2123 2281 3176
FROJMOVIC, MONY M. 0621 2046
FROST, BARRIE J. 3743
FROST, ERIC 2208
FRUTEAU DE LACLOS, BERNARD 2832
FRYER, JAMES N. 0622
FUCHS, ELAINE V. 2675 3122
FUERST, DARREN R. 3377
FUJITA, DONALD J. 0623 3220 3577
FUKS, ABRAHAM 0370 2295 2296 2317 2658 3008 3068 3271
FUNK, WALTER D. 2833
FUNNELL, BARBARA E. 0624 2554
FUNNELL, W. ROBERT J. 0625
FUTCHER, A. BRUCE 3124
GAGE, FRED H. 2894
GAGNAN-BRUNETTE, MICHELE 0626
GAGNON, ANITA J. 3378
GAGNON, CELINE 3379
GAGNON, CLAUDE 0627 0628 2877
GAGNON, DANIEL 2343 2361
GAGNON, GUY 3380
GAGNON, NATHALIE 3381
GAGNON, REMI 3382
GAGNON, ROBERT 0629 2555
GAJEWSKI, JERZY B. 0489
GALBRAITH, RUTH S. 1104
GALIANA, HENRIETTA L. 0630
GALL, D. GRANT 0631 2944
GALLAND, CONRAD C.R. 2834
GALLIE, BRENDA L. 0632
GALLIN, WARREN J. 0633
GALLINGER, STEVEN 2835
GALLO-PAYET, NICOLE 0120 0634 0635 2087 2221
GALLOWAY, ANNE M. 3383
GALSWORTHY, SARA B. 0636
GAN, KEZHENG 2836
GANEM, DONALD 3064
GANGULY, PALLAB K. 0637 3158
GANOZA, M. CLELIA 0638 2436
GANZ, PETER R. 0639
GARBER, ANTHONY T. 3571
GARCEA, ROBERT L. 2721
GARCIA, LUIS F. 3811
GARCIA, RAUL 2275 3475
GARDNER, MARTIN J. 0962 1780 2310
GARFIELD, ROBERT E. 0640
GARIEPY, JEAN G. 0641 2556
GARNETT, E. STEPHEN 0358 0642
GARNIER, FRANCE 3384
GARRETT, WILLIAM E., JR. 2723
GARSON, KENNETH 2837
GARTNER, GLORIA M. 3385
GARTNER, JOHN G. 0643 2123

GASCON-BARRE, MARIELLE 0418 0644 2298 2299 2473 3245 3355
GATI, WENDY P. 2362
GAUCI, DANIELLE F. 3386
GAUDREAU, PIERRETTE 0645
GAULDIE, JACK 0646 0647 2148
GAULT, MATHEW H. 0648 1891
GAUTHIER, ERIC 3387
GAUTHIER, JANEL 3473
GAUTHIER, SERGE G. 2297
GAUVREAU, DENIS 2331 2778
GAVINO, VICTOR C. 0649 1008 2047
GEDAMU, LASHITEW 0650 3077
GEERTSEN, SUSANNE 3388
GEIGER, JONATHAN D. 0651 0652 2557 3581
GELFAND, ERWIN W. 2963
GELFAND, TOBY 2968
GENT, MICHAEL 0380 0381 1335 2352
GEOFFRION, YVES H. 1823
GEOFFROY, GUY 3515
GEORGE, SUSAN R. 2313 2737 2917
GERBER, GERHARD E. 0653 3684
GERMAIN, LOUIS 2678
GERMINARIO, RALPH J. 0654
GERRARD, JONATHAN M. 0655 0865 2123 2474
GERSTER, JEAN L. 3389
GERTZBEIN, STANLEY D. 0656
GERVAIS, FRANCINE 0657 0658
GERVAIS, FRANCOIS 3390
GETZOFF, ELIZABETH D. 2728
GHADIRIAN, ESFANDIAR 2558
GHADIRIAN, PARVIZ 1008
GHENT, CAMERON N. 0790
GHITESCU, D.D. LUCIAN 3391
GHOSE, TARUNENDU 0659 0660
GHOSH, HARA P. 0661 2042 2048 3661
GIANOULAKIS, CHRISTINA 0662
GIBB, WILLIAM 0663
GIBSON, CANDACE J. 0664
GIBSON, DAVID M. 0665
GIBSON, ROSALIND S. 0065
GIGUERE, VINCENT 0666 2559 3005
GILES, ALAN R. 0667
GILES, WAYNE R. 2322 2732
GILLAM, SHIRLEY 0668 3209
GILLIS, ANNE M. 2322
GILLSTROM, BRENDA J. 3392
GIMBRONE, MICHAEL A., JR. 2777
GINGRAS, FRANCE 3393
GINGRAS, GABRIEL 0669
GINSBERG, JODY 0670 0671
GINTHER, OLIVER J. 2892
GIRARD, DOMINIQUE 0168
GIRARD, GUYLAINE 3394
GIROUX, SYLVIE 2838
GJEDDE, ALBERT H. 2297 2332 2367 3495
GLADMAN, DAFNA D. 0672
GLAVAS, NATALIE A. 3395
GLAVIN, GARY B. 0673
GLAVINOVIC, MLADEN I. 0674
GLENN, BRIAN L. 3396
GLICKMAN, BARRY W. 0675
GLOVER, GARY H. 3030
GLOVER, J.N. MARK 3397
GLOVER, JOHN R. 3398
GODBOUT, ROSELINE 0676
GODDARD, PHILIP J. 2839
GODSE, DAMODAR D. 1923
GODSON, DALE L. 2840
GOETTLER, DIANNE 0201
GOH, JOANNE W.Y. 0677 2049 2560
GOLD, MARVIN 0678 2096
GOLD, REYNOLD J.M. 0679
GOLDBERG, HARVEY A. 0680
GOLDBERG, HOWARD J. 2841
GOLDENBERG, GERALD J. 0891
GOLDSMITH, HARRY L. 0681 2437
GOLDSTEIN, JOSEPH L. 2688
GOLTZMAN, DAVID 0682 2046 2050 2063 2189 2363 2887
GOODALE, MELVYN A. 0683 3292 3451 3641
GOODCHILD, NANCY L. 3399
GOODFELLOW, PAUL J. 0684 2561 3401 3547
GOODFELLOW, PETER N. 3138
GOODMAN, COREY S. 2713
GOODWIN, PAMELA J. 0685
GOODYER, CYNTHIA G. 0686 3078
GOPALAKRISHNAN, VENKAT 1205
GOPING, ING S.M. 3400
GORCZYNSKI, REGINALD M. 0687 0688
GORDON, JULIUS 2287 2438
GORDON, TESSA 2318
GORECKI, DENNIS K.J. 0809
GOREN, H. JOSEPH 0689
GORESKY, CARL A. 0690 0691 1373 2051 2345 2439
GORSKI, SHARON M. 3401
GORZALKA, BORIS B. 3675
GOTLIB, IAN H. 3533
GOTLIEB, AVRUM I. 0692 1022 2052 3356
GOTMAN, JEAN 0693
GOTTFRIED, STEWART B. 0694
GOUDREAU, GUY 2659
GOUGOUX, ANDRE 0695
GOVINDAN, MANJAPRA V. 2277
GOW, CATHERINE A. 3402
GOYER, ROBERT A. 2149
GRACE, ANTHONY A. 3658
GRAF, PETER 2285
GRAFF, LESLEY A. 3403
GRAHAM, ANGUS F.S. 1211
GRAHAM, BRIAN L. 0393
GRAHAM, BRUCE S. 2300
GRAHAM, CHARLES H. 3404
GRAHAM, FRANK L. 0696 1455 2407 3632
GRAHAM, KAREN A. 3405
GRAHAM, ROGER W. 2842 3194
GRANGER, D. NEIL 2905
GRANT, CAROLINE E. 3213
GRANT, CHRISTOPHER C.R. 2843
GRANT, CHRISTOPHER W.M. 0697 3422
GRANT, DAVID R. 0608
GRANT, DENIS M. 0698 2562
GRASSINO, ALEJANDRO E. 0699 0700
GRATTON, ALAIN 0701
GRATTON, SOPHIE 3406
GRAVEL, CLAUDE 2844
GRAVEL, DENIS 0192 3260
GRAVEL, ROY A. 0702 0703 3118
GRAVES, ROGER 3258
GRAY, ANNA 3407
GRAY, DARRIN J. 3408
GRAY, DOUGLAS A. 3418
GRAY, MICHAEL W. 0704
GRAY, MURRAY R. 1800 1801
GREEN, DOUGLAS R. 0705 0706 0707
GREENBERG, ARNOLD H. 0708 0949 0950 2123
GREENBERG, CHERYL R. 0709 3432
GREENBERG, GORDON R. 0710
GREENBLATT, JACK F. 0711 0712 2771
GREENSHAW, ANDREW J. 0713 3582
GREENWAY, CLIVE V. 0714
GREENWOOD, CAROL E. 3453 3499 3722
GREGOIRE, JEAN 2343
GREGORY, DAVID M. 3409
GREGSON, PETER H. 0834 2381
GRENIER, DANIEL 2222
GRENIER, FRANCOIS 3410
GRETTON, HEATHER M. 3411
GRIEBEL, PHILIP J. 2845
GRIFFIN, BEVERLY E. 2910
GRIFFITH, C. MAY 2846 3412
GRIFONE, ROSARIA 3413
GRIGLIATTI, THOMAS A. 1749 3210
GRIGORIADIS, AGAMEMNON E. 2847
GRIGORIADIS, SOPHIE 3414
GRIMM, PAUL C. 2848
GRINSTEIN, SERGIO 0715 1572 2960 3686

INDEX

GROCHOWSKI, EDWARD W. 2329
GRONOSTAJSKI, RICHARD M. 0716 2563
GROOM, ALAN C. 0717
GROS, PHILIPPE 0718 0719 1647 3384 3614
GROSE, JOHN H. 1043
GROSS, MICHAEL 2364 2386
GROSS, PAUL M. 0720 3137
GROSVELD, FRANK G. 2808
GROVER, ASHOK K. 0721
GROVES, HALLIE M. 0722
GRUSS, PETER 2683
GRYNPAS, MARC D. 0324 0723
GUAN, ALEX L. 3415
GUARDO, ROBERT 2311
GUARENTE, LEONARD 2697
GUAY, JEAN-MARTIN 3416
GUERNSEY, DUANE L. 3555
GUEVARA, MICHAEL R. 0724
GUHA, ABHIJIT 2660
GUIDOIN, ROBERT G. 0725 2191 2365 2366
GUIJON, FERNANDO B. 1208
GUILBERT, LARRY J. 2179
GUILLEMETTE, GAETAN 0726 2087 3747
GUITE, PIERRE 3417
GUITTON, DANIEL 0727 3586
GULRAJANI, RAMESH M. 2311
GUO, XIAOJIA 3741
GUO, YUDING 2849
GUPTA, KALPANA 3418
GUPTA, RADHEY S. 0728 0729
GUPTA, SANJOY K. 2850
GUPTA, V. SAGAR 0730 0731
GURBINDO, COVADONGA 2851
GURD, JAMES W. 0732
GURDON, JOHN B. 2890
GUREVICH, MARIA 3419
GUTKOWSKA, JOLANTA 0733 3838
GUTTMAN, MARK 2564
GUTTMANN, RONALD D. 0370 2295 2296
GUYDA, HARVEY J. 0734
GWYN, D. GRAHAM 0735 2150
GYLES, CARLTON L. 1983 3153
HABERMAN, HERBERT F. 0736
HACHE, ROBERT J.G. 2852
HACHINSKI, VLADIMIR C. 0737
HADJISTAVROPOULOS, HEATHER D. 3420
HAHN, ANGELIKA F. 0555
HAHN, PETER 2440
HAIDL, IAN D. 3421
HAINES, DEBORAH M. 2876
HAJEK, IVAN 3841
HAKIM, ANTOINE M. 0738 2297 2367
HALDANE, DAVID J.M. 1156
HALES, BARBARA F. 0739 0740 2137 2756
HALL, BRIAN K. 2722
HALL, RICHARD I. 2646
HALLENBECK, PATRICK C. 0741 1155
HALLETT, PETER E. 0742 0743
HALLONQUIST, JOHN D. 0744
HALLORAN, PHILIP F. 0745 2764
HALPERIN, MITCHELL L. 0746 0747
HALPERN, MARNIE E. 2853
HAMEL, EDITH 0748 2565
HAMERTON, JOHN L. 0749
HAMET, PAVEL 0750 0751 0752 2053 2198 2275
HAMILTON, IAN R. 0753 0754
HAMILTON, J. RICHARD 0755
HAMILTON, KATHERINE S. 3422
HAMMOND, GEOFFREY L. 2274 3656 3688
HAMMOND, JAMES R. 0756 2566
HAMPSON, DAVID R. 0757 2272
HAMPSON, M. ELIZABETH A. 0758
HAN, VICTOR K.M. 2274
HAN, XINQIANG 2854
HANCOCK, ROBERT E.W. 0759 2324 3597
HANCOCK, RONALD 0760
HANLEY, DAVID A. 0761
HANLY, JOHN G. 0762
HANNA, WEDAD M. 0685
HANNAH, MARY E. 0763 1030
HANNAH, WALTER J. 0763
HANNAM, ALAN G. 0764 2967
HANRAHAN, JOHN W. 0765 2567
HANSEN, JANICE S. 3423
HARDEN, PHILIP W. 3424
HARDING, PAUL G.R. 0766
HARE, ROBERT D. 0767 3368 3392 3411 3428 3548
HARFORD, CATHERINE A. 3425
HARGREAVE, FREDERICK E. 0768
HARGREAVES, JOHN A. 3851
HARLAN, JOHN M. 2740
HARLEY, CALVIN B. 0769
HARNISH, DELSWORTH G. 0770 2148 3580 3602
HARPER, MARY ELLEN 3426
HARRIS, JOHN F. 0771 0772
HARRIS, MURIEL J. 0918
HARRIS, RAYMOND C. 2743
HARRIS, TAMARA L. 3427
HARRISON, JOAN E. 0773
HARRISON, ROBERT V. 0774
HARROP, RONALD 2329
HARSANYI, BARBARA B. 2300
HART, STEPHEN D. 3428
HARTWICK, R. WARREN J. 0685
HARVEY, P. ROBERT C. 0775
HARVEY, STEPHEN 0776 3231
HASEY, GARY M. 1923
HASLAM, RICHARD J. 0777 3307
HASSELL, JOHN A. 0778 0779 3335 3732
HASSESSIAN, HAROUT M. 2855
HASSOUNA, MAGDY M. 0780
HASTINGS, KENNETH E.M. 0781 0782 3588
HATTEN, MARY E. 2822
HATTORI, TOSHIAKI 0783 0784
HAVELE, CALLIOPI 0785
HAWES, EDWARD M. 2306
HAWKES, RICHARD B. 0786
HAWRYSHYN, CRAIG W. 2739
HAY, ELIZABETH D. 2846
HAY, GEORGE W. 1791
HAY, JOHN B. 0787 2151 2377 3733
HAYDEN, MICHAEL R. 0788 2054 2285 2325 2329 2938
HAYES, KRISTEN 3429
HAYES, MICHAEL A. 0789 2915 3095 3156
HAYGLASS, KENT T. 2123 2281 3901
HAYNES, LAWRENCE W. 2568
HAYNES, R. BRIAN 2368
HAYWARD, CATHERINE P.M. 2856
HAYWOOD, JOSEPH R. 2955
HEAD, SUSAN C. 3430
HEARTWELL, BARBARA J.E. 0201
HEATHCOTE, E. JENNY L. 0790 2369
HEATHCOTE, J. GODFREY 1851
HEATON, JEREMY P.W. 0791
HEBERT, JACQUES 0792 3274 3382
HECHTMAN, HERBERT B. 2925
HECHTMAN, PETER 0793
HEERSCHE, JOHANNES N.M. 2283 2344 2370 3186
HEFFERNAN, MICHAEL L. 3431
HEGELE, RICHARD G. 2857
HEI, YONG-JIANG 2858
HEIDBUURT, RUTH G. 3432
HEIGENHAUSER, GEORGE J.F. 0794 3609
HEISLER, SEYMOUR 0795 2371 2510 2881
HELLMAN, JONATHAN 0763
HEMLER, MARTIN E. 2754
HEMPHILL, KENNETH J. 3433
HENDY, GEOFFREY N. 0796 2050 2063 2569
HENIKOFF, STEVEN 2763
HENKELMAN, R. MARK 0232 0912 1432 3306
HENKEMEYER, MARK J. 2859
HENRY, JAMES L. 0797
HERGOTT, GREGORY J. 3181
HERMAN, ROBERT J. 2647

HERMIER, DOMINIQUE 3829
HERMO, LOUIS 0798 3297
HEROUX, MARYSE 3434
HERRUP, KARL F. 2920
HERSCOVICS, ANNETTE A. 0799
HERSKOWITZ, IRA 3740
HERTZ, LEIF 0800 3020
HERZBERG, GENE R. 0801
HESS, ROBERT F. 0802 2055
HEW, CHOY-LEONG 0803 0804 2056 2152 3729
HICKEY, DONAL A. 0805
HIERLIHY, LYNN E. 3435
HIGGINS, ROBERT 2752
HILL, DAVID J. 2274
HILL, DAVID P. 2860
HILL, RICHARD P. 0806 0851 1094
HIMMELFARB, HOWARD J. 2679
HIMMS-HAGEN, JEAN 0807 0808 3426
HINCHEY, E. JOHN 2345
HINDMARSH, K. WAYNE 0809 3702
HINDSGAUL, OLE 0810 2102
HINKE, JOSEPH A. 0811
HINTON, GEOFFREY E. 2834
HIRSCH, DAVID J. 1268
HIRSCH, MARTIN S. 2769
HIRSH, JACK 0812
HIRST, MAURICE 0813
HISCOTT, JOHN 0814 2570 3348
HITCHMAN, ANTHONY J.W. 0773
HNATOWICH, MARK R. 2861
HO, ANTHONY K. 0815 2571
HO, MAY 0109
HOANG, TRANG K. 0816 2198
HOAR, DAVID I. 3212
HOBAN, DARYL J. 3208
HOBBS, BARRY B. 0561
HOBKIRK, RONALD 0817 2441
HOCHACHKA, PETER W. 2711 3336
HODGES, ROBERT S. 2153 2276
HODGSON, ANTONY J. 3436
HODGSON, DAVID R. 2965
HOEHN, KATJA 2862
HOEY, JOHN 3378
HOFFER, J. ANDRES 0818
HOFFER, L. JOHN 0819 2182 2183
HOFFMAN, DIANE C. 2863
HOFMANN, THEO 0820 2125
HOGAN, NEVILLE 3436
HOGG, DAVID 0821
HOGG, JAMES C. 0822 0823 2085 2857 3284
HOGGE, DONNA E. 0824
HOKFELT, TOMAS 3130
HOLASH, JOCELYN A. 3437
HOLDEN, JAMES E. 2285
HOLDEN, JEANETTE J.A. 0825
HOLDEN, RONALD R. 3649
HOLITZNER, CHRISTINE A. 3438
HOLLAND, AUDREY L. 3450
HOLLAND, F. JOHN 0826
HOLLAND, G. REX 0827 2154
HOLLAND, HERBERT L. 1803
HOLLAND, PAUL C. 0828
HOLLENBERG, CHARLES H. 0829
HOLLENBERG, MORLEY D. 0830
HOLMA, BO O.A. 3812
HOLMES, CHARLES F.B. 2276
HOLMQUIST, GERALD P. 2800
HOLOWACHUK, EUGENE W. 0831
HOLUB, BRUCE J. 0832
HOLWERDA, BARRY C. 2864
HOMCY, CHARLES J. 2724
HONCHARIK, NICHOLAS 2000
HONER, WILLIAM G. 2865
HOOD, DAVID A. 1610
HOOEY, PATRICK N. 3439
HOOK, MAGNUS 2966
HOPKINS, DAVID A. 0833
HOPKINS, SUSAN R. 2866
HORACEK, B. MILAN 0834 3352 3523
HORACKOVA, MAGDA 0835
HORE, JONATHAN 0836 3396
HORLEY, JAMES W. 3440
HOROWITZ, STUART 3029
HOUDE, DANIEL 0837 2223
HOULE, BENOIT 3441
HOUSMAN, DAVID E. 2870 3018
HOWARD, RUSSELL J. 3015
HOWARD, S. PETER 0838 2572
HOWELL, ANN MARIE 2867
HOWELL, ROBIN E. 2300
HOWLETT, SUSAN E. 0839 2093
HOZUMI, NOBUMICHI 0840 3165
HRAMIAK, IRENE M. 0514
HRDINA, PAVEL D. 0841
HSIANG, YORK N.-H. 0842
HSU, SHU-CHAN 3442
HSU, YI-TE 3443
HU, BIN 2868
HU, DAVID C.K. 1982
HU, XIUYUAN 2869
HUBBARD, JOHN W. 2224 2306
HUDSON, ALAN R. 1123 2811 2974
HUDSON, ARTHUR J. 0843
HUDSON, ROBERT J. 0844
HUDSON, THOMAS J. 2870
HUET, P.-MICHEL 0845 0846 2298 2299 2372
HUFF, MURRAY W. 0847 2405
HUG, MARTIN B. 3444
HUGHSON, RICHARD L. 3830
HUGO, PATRICE 2871
HUIZINGA, JAN D. 2291 2573
HULBERT, WILLIAM C. 0848
HULETSKY, ANN 2872
HULTBORN, HANS 2741
HUMPHRIES, R. KEITH 0849 0850 2574 2895
HUNT, JOHN W. 0851 1094
HUNTER, GRAEME K. 0852 0853
HUNTER, IAN W. 0854 0937 3744 3745
HUNTING, DAREL J. 2279
HURLBERT, R. JOHN 2873
HUSSAIN, SABAH N.A. 0855
HUTCHINSON, LLOYD M. 3445
HUYER, MARIANNE 3446
HYDE, MARTYN L. 0856
HYNES, DAVID M. 1582
IACONO, WILLIAM G. 3461
IATROU, KOSTAS 0857 2475
IGREJA, ISABEL 3447
IJAZ, MOHAMMAD K. 2874
ILECKI, HENRY J. 1423
INABA, TADANOBU 0923 2155 3749
INCH, W. RODGER 1848
INGENMEY, RITA 3448
INGLES, C. JAMES 0858 3364
INGLIS, DEBRA L. 3449
INGLIS, JAMES 3507
INGOLD, KEITH U. 1231
INMAN, ROBERT D. 0859 3193
INNIS, SHEILA M. 0860 2373
IRVINE, ELIZABETH J. 2392
IRWIN, DAVID M. 2875
ISCOE, STEVEN D. 0861
ISCOVE, NORMAN N. 0862 2655 3683
ISENMAN, DAVID E. 0863 2057 2125 3647
ISRAEL, YEDY 0864
ISRAELS, LYONEL G. 0891
ISRAELS, SARA J. 0865
ISSA, FAIQ G. 2575
ISSEKUTZ, ANDREW C. 0866
ISSEKUTZ, THOMAS B. 0867
IWAZUMI, TATSUO 0868
IYER, VENKATRAM N. 0869
JACKOWSKI, GEORGE 0870
JACKSON, ALAN C. 0871
JACKSON, DOUGLAS N. 3407
JACKSON, MARION L. 2876
JACKSON, SUSAN T. 3450
JACOBS, J. ROGER 0872 2058
JACOBSON, HARRY R. 2743 3192
JACOBSON, WILLIAM 0873
JAFFE, ROBERT B. 2682
JAKOBSON, LORNA S. 3451
JAMALI, FAKHREDDIN 0874 3584 3599
JAMES, BRIAN R. 1724
JAMES, MICHAEL N.G. 2276

INDEX

JARRELL, JOHN F. 1278
JARVI, KEITH A. 2877
JARVIE, KEITH R. 2878
JASMIN, LUC 2661
JASSAR, BALVINDER S. 2879
JAWORSKI, MARTINE A. 0875
JAY-GERIN, JEAN-PAUL 2279
JAYARAMAN, DEV 3452
JEEJEEBHOY, KHURSHEED N. 0876 0877 0878 2374
JEFFERIES, WILFRED A. 3421 3501 3645
JEFFERY, JOHN R. 2000
JELLINCK, PETER H. 0879
JENKINS, DAVID J.A. 3097
JENKINS, MEGAN W. 3453
JENNINGS, DONALD B. 0880
JERRY, L. MARTIN 2389
JEVNIKAR, ANTHONY M. 2880
JEWELL, LAURENCE D. 2362
JHAMANDAS, JACK H. 0881 2576 3177
JHAMANDAS, KHEM H. 0882 3628
JIA, YANLIN 2881
JIANG, HE 2882
JIANG, MINGTAO 2883
JIANG, XUNGAO 3454
JIMBOW, KOWICHI 0883 2156 2375 2376 2793 3070
JIRIK, FRANK R. 0884
JOANETTE, YVES 2302 2476 3098 3229
JOBE, ALAN H. 2924
JOFFE, A. MARK 2662
JOFFE, RUSSELL T. 0885
JOHNSEN, ROBERT C. 3455
JOHNSON, DAVID C. 0886 3445
JOHNSON, DENNIS D. 0887
JOHNSON, JOANNE E. 3456
JOHNSON, RICHARD T. 3037
JOHNSON, ROGER B. 2120
JOHNSON-DOUGLAS, SUSAN M. 3635
JOHNSON-LUSSENBURG, C. MARGARET 3087
JOHNSRUDE, INGRID S. 3457
JOHNSTON, C. CELESTE 0888 2266
JOHNSTON, CHARLOTTE 0889
JOHNSTON, DAVID G. 0334
JOHNSTON, GERALD C. 0890 3626
JOHNSTON, JAMES B. 0114 0891
JOHNSTON, JUDITH R. 3028
JOHNSTON, K. WAYNE 0892 2036
JOHNSTON, MILES G. 0893 2377
JOHNSTON, SHEILA A. 2884
JOHNSTONE, DAVID E. 2410
JOHNSTONE, ROSE M. 0894 2059 2157 3528
JOJART, ISTVAN 2885
JOLICOEUR, FRANCOIS B. 0895 2225 2316
JOLICOEUR, PAUL 0896 0897 0898 2198 2333 2659 2844 3111 3168 3682
JOLIVET, JACQUES 0899 2110 2226
JOLY, ERIK 3458
JONEJA, MADAN G. 2158
JONES, ALLEN S. 3459
JONES, AMANDA M. 2886
JONES, BARBARA E. 0900 3902
JONES, DEREK W. 2060 2300 3852 3853
JONES, DOUGLAS L. 0901
JONES, ELIZABETH W. 2951
JONES, GLENVILLE 0902 2227 2849
JONES, LYNETTE A. 0903
JONES, NORMAN L. 0794 0904 3609
JONES-GOTMAN, MARILYN 0905 3349
JONGSTRA, JAN 0906 0907
JORDAN, LARRY M. 0908 3338
JORDANA, MANEL 0909
JORGENSEN, ANNELISE O. 0910 2061 2477
JOSHI-SUKHWAL, SADHNA 2347
JOTHY, SERGE 0911 3171
JOY, MICHAEL L.G. 0912
JOYNER, ALEXANDRA L. 0913 2577 3505 3546
JUGDUTT, BODH I. 0914
JULIEN, JEAN-PIERRE 0915 2997
JULIEN, PIERRE 3290
JULIUS, MICHAEL H. 0916 0917
JUNKER, ANNE K. 2359
JURILOFF, DIANA M. 0918 2478
KADAR, DEZSO 0923
KAFATOS, FOTIS C. 2695
KAISER, STEPHANIE M. 2887
KAISER, URSULA B. 2888
KAKO, KYOHEI J. 0919
KALANT, NORMAN 0920
KALASKA, JOHN F. 2278
KALNINS, VITAUTS I. 0921 2061 3181
KALOUSEK, DAGMAR K. 0922
KALOW, WERNER 0923 3749
KAMEL-REID, SUZANNE K. 2889
KAN, FREDERICK W.K. 0924 2578 3903
KANDEL, RITA A. 0406
KANFER, JULIAN N. 0925 0926 2062
KANG, C. YONG 0927 2334 2378
KAO, KENNETH R. 2890
KAPLAN, FEIGE 0793
KARAPLIS, ANDREW C. 2680
KARCZ, STEVEN R. 2891
KARDAMI, ELISSAVET 0928 2579
KARINO, TAKESHI 0929
KARLIK, STEPHEN J. 0600
KARMALI, MOHAMED A. 2301 3430
KARMAZYN, MORRIS 0930
KARMY, GRIGORY 3460
KARPATI, GEORGE 0931
KASTELIC, JOHN P. 2892
KASTING, NORMAN W. 0932 2479 2774 3719
KASTRUKOFF, LORNE F. 0933 2159
KATES, MORRIS 0934
KATSANIS, EMMANUEL 2893
KATSANIS, JOANNA 3461
KATZ, SIDNEY 0935 2379
KAUFMAN, SUSAN E. 0936
KAUFMANN, CHARLES A. 2865
KAUL, RAVI 1947
KAWAJA, MICHAEL D. 2894
KAY, CYRIL M. 2276
KAY, LEWIS E. 2681
KAY, MARGARITA 3409
KAY, ROBERT J. 2895
KEARNEY, ROBERT E. 0937 2160
KEATING, ARMAND 2380 2388 3206
KEEGAN, DAVID L. 3552
KEELEY, FRED W. 2056 2152
KEHL, STEVEN J. 0938
KELLER, ERIC 2302
KELLER, HEATHER H. 3462
KELLEY, VICKI E. 2880 3082
KELLY, GREGORY M. 2896
KELLY, MELANIE E.M. 2897
KELLY, PAUL A. 0939 2063 3627
KELTON, DAVID F. 2898
KELTON, JOHN G. 0940 2856
KENG, TERESA 0941
KENNEDY, JAMES C. 1510 2162
KENNEDY, THOMAS G. 0942 3663 3730 3904
KEOUGH, KEVIN M.W. 0943 0944 2064
KEPRON, M. WAYNE 2281
KERBEL, ROBERT S. 0945 3110 3520
KERRIGAN, CAROLYN L. 0946
KESSOUS-ELBAZ, ALLEGRIA 2110
KETIS, NIKA V. 0947
KHALIL, M. WAHID 0948
KHALIL, NASREEN 0949 0950
KHAN, MASOOD U.N. 0951 2088
KHANDELWAL, RAMJI L. 0952 2228 3813
KHATTER, JAGDISH C. 0953
KHOLOPOV, ALEXANDER 2310
KHOURY, MARIANNE 2899
KIBERD, BRYCE A. 0954
KIJEWSKI, MARIE F. 2361
KILBURN, DOUGLAS G. 2418 2842 3194
KILLIAN, KIERAN J. 0955
KILLINGER, DONALD W. 0956
KIM, CAIUS 3463
KIM, PETER C.W. 2900
KIM, RYUNGSOON S. 0957
KIM, SEUNG U. 0958 2136 2229 2285

KIMMEL, CHARLES B. 2853
KIMURA, DOREEN 0959 0960
KING, KAREN M. 3464
KING, MALCOLM 0961
KINGMA, IRIS 3195
KINGMA, YNTE J. 0198
KINLOUGH-RATHBONE, RAELENE L. 1307
KIRBY, R. LEE 0962 2381
KIRKLAND, JAMES L. 0829
KIRKPATRICK, D. LYNN 0963
KIRSCHNER, DANIEL A. 2830
KIRSCHNER, MARC W. 3065
KIRSHENBAUM, LORRIE A. 3465
KIRULUTA, H. GEORGE 0964
KISHIHARA, KENJI 2901
KISIL, FRED T. 2281
KISILEVSKY, ROBERT S. 0965 0966 2161 2162 2382
KITSON, C. NEIL 2138
KLASSEN, GERALD A. 2004
KLECKNER, NANCY E. 3006 3539
KLEIN, GEORGE J. 0901
KLEIN, MARC L. 2408
KLEIN, MICHEL H. 0967 0968
KLINGEMANN, HANS-G. 0969
KLIP, AMIRA 0970 2383 2480 2952 3259
KNAUS, EDWARD E. 0971 0972 1956 2163 2164 2384 3197
KNETEMAN, NORMAN M. 2780
KNILL, RICHARD L. 0973
KNOWLES, JOHN B. 0974 3734
KO, W.S. KERRY 3466
KOCH, C. ANNE 3467
KOHLER, FRANCOIS 3854
KOHN, PAUL M. 3419
KOLB, BRYAN E. 0975
KOMBIAN, SAMUEL B. 3468
KOMIYAMA, KUNIO 0976
KOO, WINSTON W.K. 1800
KOOPMANS, HENRY S. 0977
KOPELMAN, HINDA 0978
KORCHINSKI, ELARIEN D. 2306
KORECKY, BORIVOJ 0979 3814
KOREN, GIDEON 0980 0981 1343 3405
KORNBERG, ROGER D. 3359
KORNBERG, THOMAS B. 3069
KORNELUK, ROBERT G. 0982 2942 3236
KOROPATNICK, D. JAMES 0983
KOSCHINSKY, MARLYS L. 3196
KOSTUK, WILLIAM J. 2408
KOTHARY, RASHMI K. 0984 2110 2580
KOTOVYCH, GEORGE 2102 2195
KOVACS, KALMAN T. 0985
KOVAL, SUSAN F. 0986 2118
KOZAK, ROMAN I. 2387
KOZOUSEK, VLADIMIR 0987
KRAICER, JACOB 0988 2165
KRAMER, MICHAEL S. 3378
KRANTIS, ANTHONY 0989 2230 3654
KRAUSE, HENRY M. 0990 2581
KRAUSE, MARGARIDA O. 3408
KRAUT, MARTY S. 3469
KREBS, EDWIN G. 2928 2934
KREIDSTEIN, MICHAEL L. 2902
KREIS, CHRISTOPHE 0991
KREMER, RICHARD 0992
KRENSKY, ALAN M. 2899
KREPINSKY, J.J. GEORGE 2065 2135
KRIEGER, CHARLES 2285 2582
KRNJEVIC, KRESIMIR 0993 2166
KRONDL, MAGDALENA 3298
KRONE, PATRICK H. 2903
KRONENBERG, HENRY M. 2680
KROPINSKI, ANDREW M. 0994 3358 3642
KRUK, RONALD V. 2385
KRUKOFF, TERESA L. 0995
KRUPKA, ANNE 3470
KRUSHEL, LESLIE A. 2904
KRUTH, STEPHEN A. 0501
KRUUV, JACK 0996
KRYGER, MEIR H. 0997
KRYSTAL, GERALD 3561
KRYWIAK, JANIS L. 3471
KUBES, PAUL 2905
KUBOW, STANLEY 0998
KUCEY, DARYL S. 2906
KUCHARCZYK, WALTER 1432
KUCHEL, GEORGE A. 2907
KUCHEL, OTTO 2275
KUDLOW, JEFFREY E. 0999 3560
KUIPER, NICHOLAS A. 3711
KUKSIS, ARNIS A. 1000 1001 2167 2442
KULPA, JANUSZ 3472
KUMAR, RAKESH 3197
KUMAR, SHRAWAN 1002
KUNIMOTO, DENNIS Y. 1003
KUPRANYCZ, DONNA B. 1846
KUREISHI, AMAR 2908
KUS, TERESA K. 2648
KWAK, JAN C.T. 2300
KWAN, CHIU-YIN 1054
KWOK, K. YIN-NAM 2273
LABELLA, FRANK S. 1004 2443
LABELLA, LISA A. 2909
LABERGE, BENOIT 3473
LABOW, ROSALIND S. 1005
LABRECQUE, LOUISE-G. 2910
LABRECQUE, NATHALIE 3474
LABRIE, CLAUDE 2911
LABRIE, FERNAND 2277 2787 3034
LABUDA, DAMIAN 2074 3393 3651
LACAILLE, JEAN-CLAUDE 1006
LACHANCE, DANIELLE 3475
LACHAPELLE, PIERRE 1007 3417
LACOSTE-ROYAL, GINETTE 2331
LACROIX, ANDRE 1008
LACROIX, LINDA M.A. 2912
LADOUCEUR, GINETTE 3476
LADOUCEUR, ROBERT 3376
LAFERTE, SUZANNE 2231
LAFLEUR, MICHEL 2913
LAFOND, JULIE 2914
LAFONTAINE, MARIELLE 3477
LAFRENIERE, RENE 2168
LAHAIE, RAYMOND G. 1009
LAKE, NORMA 1010
LAKINS, JOHNATHON N. 3478
LAL, SAMARTHJI 1011
LALA, PEEYUSH K. 1012 1013 3270 3404
LAM, JOSEPH S.-L. 1014 3479 3500
LAM, JULES Y.T.C. 1015
LAM, MICHELE Y.C. 3479
LAM, RAYMOND W. 2023
LAM, STEPHEN 2003
LAM, YUK-MIU 0272
LAMARCHE, CLAUDE 2360
LAMARRE, JONATHAN 2915
LAMARRE, YVES 2278 2323 2678
LAMBERT, MARIE-A. 2074
LAMBERT, RAYMOND D. 3487
LAMPING, DONNA L. 2358
LAMY, PETER P. 3855
LANDOLT, M. CAROLINA 3480
LANDRY, CLAIRE 3481
LANDRY, FERNAND 3340
LANDRY, JACQUES 1016 2070 3485
LANDYMORE, RODERICK W. 1017
LANE, BYRON G. 1018
LANEUVILLE, ODETTE 3482
LANG, ANTHONY E.T. 0642
LANG, BERND F. 1019
LANGELIER, YVES 2110
LANGER, JACOB C. 1020
LANGILLE, B. LOWELL 1021 1022 2052 2303 3286
LANGILLE, ROBERT M. 1023
LANGLEBEN, DAVID 1024 1768
LANGLOIS, YVES E. 0515 1025
LANSDORP, PETER M. 3313
LANTHIER, THERESE 0515
LAPOINTE, HENRY J. 3182
LAPOINTE, JEAN-YVES 1026 1027 2066
LAPORTE, REGENT 2916
LAPP, WAYNE S. 1028 2046 3721
LAPRADE, RAYNALD 0280 2066
LAROCHELLE, PIERRE 1029 1229

INDEX

LAROSE, LOUISE 3483
LARSEN, BODIL A. 1160 3737
LASKIN, CARL A. 1030
LASSONDE, MARYSE 3515 3532
LATOUR, JEAN-GILLES 3607
LAU, DAVID C.W. 1031
LAUGHREA, MICHAEL 1032
LAUPACIS, ANDREAS 0381 1033 2294 2386 2392
LAURIER, LISANNE G. 2917
LAUTT, W. WAYNE 1034 1035
LAUZON, ROBERT J.P. 2918
LAVALLEE, MICHEL 1036
LAVIGNE, GILLES 0508
LAVIOLETTE, MICHEL 1037 2391 3311
LAVOIE, JOEL 3484
LAVOIE, JOSEE 3485
LAVOIE, MARC 1038 1039
LAW, BARBARA J. 1040
LAWN, RICHARD M. 3196
LAXER, RONALD M. 1698
LAYDEN, RONALD E. 2919
LAZAROVITS, ANDREW I. 1041
LAZIER, CATHERINE B. 1042
LAZURE, CLAUDE 2194 2314
LEBEL, MARCEL 1043
LEBLANC, A.-ROBERT 2311
LEBLANC, JACQUES A. 1044 2444
LEBLANC, NORMAND R. 1045 2583
LEBLANC, RAYMOND P. 0987
LEBLANC, RICHARD 2297
LEBLOND, CHARLES P. 1046
LECLERC, DANIEL 3486
LECLERC, NICOLE 2920
LECLERC, PIERRE 3487
LECOMTE, ROGER 1047
LECOURS, ANDRE R. 2302 3513
LEDDY, JOHN J. 3488
LEDERIS, KARL P. 1048
LEDOUX, MARIELLE 3604 3640
LEDOUX, STEPHANE 2921
LEDSOME, JOHN R. 1049
LEE, C.-Y. GREGORY 2054 3502
LEE, EUNICE R. 1050
LEE, JEREMY S. 1051 2232 2481
LEE, JONATHAN M. 3489
LEE, PATRICK W.K. 1052
LEE, PING I. 2233 3207
LEE, ROBERT G. 1053
LEE, ROBERT M.K.W. 1054
LEE, SAMUEL S 1055
LEE, SPENCER H.S. 1056 1581
LEE, STEPHEN 3490
LEE, STUART H. 3491
LEE, TING Y. 2387 3731
LEE, VALENTIA M.W. 3492
LEEDER, J. STEVEN 1057 2649
LEENEN, FRANS H.H. 1058
LEEPER, HERBERT A. 3228
LEFEBVRE, DIANA L. 3493
LEFEBVRE, LOUIS 3494
LEFEBVRE, YVONNE A. 1059 2234
LEFKOWITZ, ROBERT J. 2861
LEGER, GABRIEL C. 3495
LEHMAN, DARRIN R. 3433
LEHOUX, JEAN-GUY 0120 0124 1060 1061
LEITER, LAWRENCE A. 2383
LEITH, DAVID E. 3019
LEMAIRE, IRMA 1062 2235
LEMAIRE, SIMON 1063 2320
LEMAY, ANDRE 0553 1064
LEMAY, GUY 1065 2354
LEMIEUX, GUY 1066
LEMIEUX, REAL 3569 3676
LEMIEUX, SUZANNE 1067
LEMIRE, BERNARD D. 1068
LENAERTS, VINCENT 1069 2736
LEPOCK, JAMES R. 0996
LEPORE, FRANCO 2290
LESIUK, HOWARD J. 2922
LETARTE, MICHELLE V.T. 1070 2169
LEUNG, PETER C.K. 1071 1072 2482
LEUNG, STEWART S.K. 3496
LEUNG, WAI-PING 2923
LEVESQUE, DANIEL 3497
LEVESQUE, LOUISE 2267
LEVESQUE, ROGER C. 1073 1074 2872 3416
LEVIN, LESLIE 0201
LEVIN, WILFRED 1094
LEVINE, DAVID Z. 1075
LEVINE, MARK N. 2483
LEVINE, MARTIN D. 1076
LEVINE, MITCHELL A.H. 2368
LEVY, EMILE H. 1077 1584
LEVY, GARY A. 0366 1078 2762 3173
LEVY, JULIA G. 2388 2511
LEVY, MORTIMER 1079
LEWANCZUK, RICHARD Z. 2663
LEWIS, JAMES F. 2924
LEWIS, MARION 1080
LEWIS, PETER N. 1081
LI, MADELINE 3498
LIBRACH, CLIFFORD L. 2682
LICHARDUS, BRANISLAV 3815
LICHTENSTEIN, SAMUEL V. 1082 1083
LIEBERMAN, PAMELA B. 3499
LIEBGOTT, BERNARD 1084
LIEW, CHOONG-CHIN 1085
LIGHT, KATHLEEN C. 3469
LIGHT, R. BRUCE 1086
LIGHTFOOT, JEFFREY B. 3500
LILLICRAP, DAVID P. 1087 1088
LIMEBACK, HARDY F. 1089 1819 2098
LIN, CHYI-CHYANG 1275
LIN, SHENG-XIANG 2277
LINDSAY, THOMAS F. 2925
LINDSELL, CLAIRE E. 2926
LING, VICTOR 1090 2770 3354 3736
LINGREL, JERRY B. 3003
LINGWOOD, CLIFFORD A. 1091 1092 2301 3430
LINN, THOMAS G. 1093
LIPPE, ROGER 3501
LIST, STEPHEN J. 0358 2927
LISTROM, ROBIN D. 2416
LITCHFIELD, DAVID W. 2928
LITTLE, PETER B. 0355
LIU, FEI-FEI 1094
LIU, MING-SUN 3502
LIU, PETER P. 3188
LIU, XINGQUAN 2929
LIU, YAFANG 2930
LIVESLEY, W. JOHN 1095
LLEWELLYN-THOMAS, HILARY A. 2268
LLINAS, RODOLFO R. 2791 3009
LO, TERENCE P. 3503
LO, THEODORE C.-Y. 1096
LOBE, CORRINNE G. 2683
LOCKWOOD, GEOFFREY R. 3504
LOCKWOOD, GINA 0685
LOEB, GERALD E. 1097 2271
LOGAN, C. CAIRINE 3505
LOH, LAMBERT C.H. 1098
LOHNES, DAVID L. 2931
LOISELLE, CARMEN G. 3506
LONGENECKER, B. MICHAEL 2389
LONGMAN, R. STEWART 3507
LOOMIS, CHRISTOPHER W. 1099 2236
LOPASCHUK, GARY D. 1100
LOPATKA, CINDY L. 3508
LORD, CATHERINE 1101
LORIMER, IAN A.J. 2932
LORRAIN, DOMINIQUE 2684
LOSIER, BRUNO J. 3509
LOUGH, JOHN O. 1774 2420
LOUIE, GORDON V. 3510
LOUIE, MARIE 3198
LOUIE, THOMAS J. 1102
LOVASIK, JOHN V. 1103
LOW, AMY M. 2933
LOW, JAMES A. 1104
LOW-NANG, LAWRENCE 3511
LOWE, ALAN A. 0764
LOWICK, BRENDA M. 3512
LOWN, J. WILLIAM 1105 2102 3816
LOZANO, ANDRES M. 2664
LOZANOFF, SCOTT 1106 2067

LOZEMAN, FREDERICK J. 2934
LUCIER, GREGORY E. 1107 2729
LUDWIG, MARA S. 1108 2584
LUDWIN, SAMUEL K. 0966 1109
LUKOWIAK, KENNETH D. 0255 1110
LUMSDEN, CHARLES J. 1111 2484
LUMSDEN, JOHN S. 2935
LUND, JAMES P. 2278 2360 3180 3856
LUNER, STEPHEN J. 0659 0660
LUO, JIANGMING 2936
LUPIEN, PAUL J. 0190 1261
LUPIEN, SONIA 3513
LUSCHER, MARK A. 3514
LUSSIER, ANDRE J.A. 1112 2087
LUSSIER, BENOIT T. 2937
LUSSIER, FRANCINE 3515
LUSSIER, ISABELLE 3516
LUU THE, VAN 2277
LYE, STEPHEN J. 1113 1114 2303
MA, YUANHONG 2938
MACAULAY, COLIN G. 2939
MACDONALD, DAWN L. 3517
MACDONALD, JOHN F. 1115 2272 2823 3004
MACDONALD, MARY HELEN 3518
MACDONALD, P. HUGH 2940
MACDONALD, ROBERT G. 0834
MACDONELL, KAREN L. 3519
MACDOUGALL, JOHN R. 3520
MACGILLIVRAY, ROSS T.A. 1116 1117 3025 3214 3303 3309 3558
MACKAY, ROBERT A. 2941
MACKAY, WILLIAM A. 1118
MACKENZIE, ALEXANDER E. 1119 2942
MACKENZIE, KEVIN R. 3521
MACKENZIE, LESLIE W. 1120
MACKENZIE, ROBERT E. 1121 2068 2069
MACKENZIE, ROBERT G. 0140
MACKIE, GEORGE A. 1122 3625 3714
MACKIE, JANE E. 2943 3522
MACKINNON, SUSAN E. 1123 2811 2974
MACKLEM, PETER T. 1124 2326 2881 3143
MACLEAN, ALISTAIR W. 0974 3734
MACLEAN, GRANT D. 2389 2390
MACLEAN, HEATHER M. 3298
MACLENNAN, DAVID H. 1125 2757 3086 3117 3857
MACLEOD, ROBERT S. 3523
MACLUSKY, NEIL J. 1126 2303 2984
MACMILLAN, VERNON H. 1127
MACNAUGHTON, WALLACE K. 2944
MACPHERSON, JANE M. (Queen's) 1128
MACPHERSON, JANE M. (Oregon) 2271
MACRAE, DUNCAN L. 3228
MACVICAR, BRIAN A. 1129 1130 2485 2862 3360
MADDURI, KRISHNAMURTHY 3524
MADSEN, NEIL B. 1131
MAGDER, SHELDON A. 1132
MAGER, DIXIE L. 1133 2585 3313 3399 3718
MAGNANI, CORRADO 3835
MAHMOUD, ADEL A.F. 3080
MAHON, WILLIAM 0923
MAHURAN, DON J. 1134
MAK, ALAN S.-L. 1135 3302 3707
MAK, TAK W. 1136 1137 2670 2753 2901 2923 2962 2978 3646
MAKI, BRIAN E. 1138
MALATJALIAN, DIKRAN A. 1300
MALER, LEONARD 1139 1140 1141 2698 2884
MALETTE, BRIGITTE 3525
MALKIN, DAVID D. 2945
MALO, CHRISTIANE 1142
MALO, DANIELLE 2946
MALO, JEAN-LUC 2391
MALOUIN, FRANCOIS 1143 2586
MAMAZZA, JOSEPH 2345
MAMER, ORVAL A. 2182 2183
MAN, RICKY Y.K. 1144
MAN, S.F. PAUL 1145
MANA, JANET M. 2947
MANA, MICHAEL J. 2948
MANDEL, FRED P. 1030
MANDEL, JEAN-LOUIS 3060
MANGALAM, HARRY J. 2949
MANION, IAN G. 3701
MANJUNATH, PUTTASWAMY 1146 1147
MANN, KENNETH G. 3039
MANNING, PATRICK J. 2950
MANOLSON, MORRIS F. 2951
MARBAN, EDUARDO 2672
MARBLE, ALLAN E. 0962 1017
MARCEAU, FRANCOIS 1148 2587
MARCEAU, NORMAND 1149 2070 3263
MARCEL, YVES L. 1494 2304
MARCHAND, RAYMOND 1150
MARCOUX, SYLVIE 0281 0607
MARESCA, ANTONELLA 2104 3317
MARETTE, ANDRE 2952
MARKS, ALEXANDER 1151 2677 3643
MARKS, GERALD S. 1152 3522 3620
MARLEAU, SYLVIE 2953
MARLISS, ERROL B. 1153 1154 2071 2818 3162
MARQUIS, GABRIEL L.A. 1155
MARRIE, THOMAS J. 1156
MARSDEN, PHILIP A. 2954
MARSH, DAVID C.C. 3526
MARSHALL, JEAN S. 1157
MARSHALL, KENNETH C. 1158 1159
MARSHALL, VICTOR W. 2327
MARSHALL, WILLIAM H. 1160
MARTEL-PELLETIER, JOHANNE 1161
MARTH, JAMEY D. 1162 3578
MARTIN, DAVID G. 3554
MARTIN, DOUGLAS S. 2955
MARTIN, GARRY L. 1163 3700
MARTIN, JAMES G. 1164 1165 1166 2486
MARTIN, JEAN-RENE 2956
MARTIN, MONTGOMERY A. 2957
MARTIN, RENEE H. 1167
MARTIN, ROD A. 3267
MARTIN, S. WAYNE 2898
MARTIN, THOMAS P. 2318
MARTIN, W.R. WAYNE 2285 2329
MARTIN-IVERSON, MATHEW T. 1168
MARTINEAU, DANIEL 2958
MARTINEAU, LUCIE 2959
MARTINOLI, MARIA G. 3527
MARUSYK, RAYMOND G. 2207
MASON, MICHAEL J. 2960
MASSAGUE, JOAN 2712
MASSE, SERGE 0111
MASSEY, THOMAS E. 1169 2237 3318
MASUI, YOSHIO 2985
MATAS, MANUEL 0334
MATHERS, DAVID A. 1170
MATHESON, DAVID S. 1171
MATHESON, GORDON O. 1172 2961
MATHEW, ANU 3528
MATHEWS, MICHAEL B. 2911
MATHIESON, CYNTHIA M. 3529
MATHIEU, JEAN-F. 3530
MATLASHEWSKI, GREGORY J. 1173
MATSUBARA, JOANNE A. 1174
MATSUYAMA, TOSHIFUMI 2962
MATTHEWS, PAUL M. 2665
MATUS, ANDREW I. 2919
MATUSIK, ROBERT J. 1175 1176
MATWIJIW, IGOR 0545
MAUK, A. GRANT 1177 2138 3415 3613
MAX, PAUL 0334
MAYER, JOEL M. 3702
MAYSINGER, DUSICA 1178
MAZER, BRUCE D. 2963
MAZER, C. DAVID 1179
MAZIADE, MICHEL 1180
MBIKAY, MAJAMBU 2053 2081 2314

INDEX

MCALPINE, PHYLLIS J. 1181
MCBRIDE, BARRY C. 1182 2941
MCBROOM, LINDA D.B. 3531
MCBURNEY, MICHAEL W. 1183 2725 2826 2981 3418
MCCABE, NICOLE 3532
MCCABE, SCOTT B. 3533
MCCANS, JOHN L. 2408
MCCARGAR, LINDA J. 2964
MCCARTY, TRACEY S. 3534
MCCLARTY, GRANT A. 1184 2335
MCCOLL, SHAUN R. 2238
MCCOOL, MICHAEL D. 3535
MCCORMACK, DAVID G. 1392 2588
MCCORMACK, JAMES P 3199
MCCREA, DAVID A. 1185 3459
MCCULLOCH, CHRISTOPHER A.G. 1186 1819 2098 2170 2746
MCCULLOCH, DAPHNE 0528
MCCULLOCH, ERNEST A. 1187 3140
MCCUTCHEON, L. JILL 2965
MCDERMOTT, MARK R. 1188 2148
MCDEVITT, HUGH O. 3114
MCDONALD, BERNARD J. 3536
MCDONALD, JOHN W.D. 2392
MCDONALD, TERENCE F. 1189 2310
MCDONALD, THOMAS J. 1190 2291
MCELHANEY, JAMES 2723
MCELHANEY, RONALD N. 1191 2138
MCERLANE, KEITH M. 1192
MCEWAN, ALEXANDER J. 2390
MCFADDEN, D. GRANT 1193
MCFADDEN, ROBIN G. 0601
MCFARLANE, SARAH 3537
MCFETRIDGE, JUDITH A. 3538
MCGANN, LOCKSLEY E. 1194 1626 2179
MCGAVIN, MARTIN J. 2966
MCGEER, EDITH G. 1195 2285 2305 2329
MCGEER, PATRICK L. 1195 1196 2305 2329
MCGHEE, JAMES D. 1197 2101 3216 3219 3234 3670
MCGLONE, JEANNETTE M. 3509
MCINNES, RODERICK R. 1198 3136 3240
MCINTOSH, CHRISTOPHER H.S. 2273
MCIVER, DONALD J.L. 1422
MCKAY, GORDON G. 2306
MCKEE, ANDREW H.Z. 3539
MCKEE, NANCY H. 1199
MCKENZIE, DONALD C. 1172 2866 2961
MCKIM, KIM S. 3540
MCLACHLAN, DONALD R. 1200 1271 3205
MCLACHLAN, KENNETH R. 2995
MCLEAN, JOHN H. 1201
MCLENNAN, HUGH 1202
MCLORIE, WHYNN 3541
MCMANUS, BRUCE M. 2760
MCMASTER, CHRISTOPHER R. 3542
MCMASTER, W. ROBERT 1203 2388 3518
MCMILLAN, ANNE S. 2967
MCMORLAND, GRAHAM H. 0072
MCMURRAY, WILLIAM C. 1204
MCNEILL, J. ROBERT 1205 1206 3189
MCNEILL, JOHN H. 1207 2072 2858
MCNICOL, PATRICIA J. 1208
MCRAE, SANDRA F. 2968
MEAKINS, JONATHAN L. 2287 2345
MEANEY, MICHAEL J.K. 1209 3257 3266
MEDDINGS, JONATHAN B. 1210 2106 2393
MEGYESI, JOSEPH F. 2969
MEICHENBAUM, DONALD 3423
MEIGHEN, EDWARD A. 1211 1212 2069 3662
MEIJ, JOHANNA T.A. 2970
MELANCON, SERGE B. 2074
MELLORS, ALAN 1213
MELOCHE, ROGER 0168
MELOCHE, SYLVAIN 2685 2971
MELVILL JONES, GEOFFREY 1214
MENARD, DANIEL 1215
MENARD, HENRI-A. 1216
MENARD, LUC 2972
MENDELSON, JULIE R. 2973
MENEILLY, GRAYDON S. 1217 2285 2589
MENEZES, JOSE P.C.A. 1218 3365
MENON, I. ARAVINDAKSHAN 0736 1219 1851
MENZIES, RICHARD I. 0105
MERALI, ZULFIQUAR 1220 3598
MERCURE, STEPHANE 3543
MERRIFIELD, PETER A. 1221 2094
MERRILEES, MERVYN J. 3817
MERZ, DAVID C. 3544
MES-MASSON, ANNE-MARIE 1222 2110
MESSIER, PAUL-EMIL 1664
MESSNER, HANS A. 1223 3092
MEUNIER, HELENE F. 1224 2590
MEYER, ERNST G. 0250
MEZEI, CATHERINE 1225
MEZEI, MICHAEL 1226 2300
MICHALAK, MAREK S. 1227
MICHALAK, TOMASZ I. 3818
MICHAUD, JEAN 2171
MICHEL, RENE P. 1228
MICHOUD, MARIE-CLAIRE 1229 1230 3621
MICKLE, DONALD A.G. 1231
MIDHA, KAMAL K. 2306 3858
MIDHA, RAJIV 2974
MIKELBERG, FREDERICK S. 1232
MIKKELSEN, TOM 2975
MILIC-EMILI, JOSEPH 1233
MILLAR, DOUGLAS G. 3545
MILLEN, KATHLEEN J. 3546
MILLER, DIANE L. 3547
MILLER, FREDA D. 2307
MILLER, GEORGE 3017
MILLER, RANDOLPH A. 2794
MILLER, RICHARD B. 3032
MILLER, RICHARD G. 1234 2172 2394 3067 3173
MILLER, ROBERT C., JR. 2418
MILLER, SYDNEY B. 1235
MILLS, GORDON B. 1236 2591 3638
MILLS, REBECCA M.I. 3548
MILNE, BRIAN 1099
MILNE, JACQUELINE L. 2976
MILNE, ROSS W. 1494 2073 2198 2304 2487
MILNER, BRENDA A. 1237 2297 2445 3457
MILNER, RUTH A. 0763 0790 2368 2396
MILOS, NADINE C. 1238 2239
MINDEN, MARK D. 1187 1239
MINK, STEVEN N. 1240
MINTA, JOE O. 1241
MINUK, GERALD Y. 0790 1242
MIRAULT, MARC-EDOUARD 1243
MISHRA, RAM K. 1244 3746
MISRA, ARUN K. 0019
MISRA, VIKRAM 2876
MITCHELL, ALAN G. 1245
MITCHELL, B.F. PETER 1246
MITCHELL, DONALD E. 2290
MITCHELL, GRAHAM F. 2891
MITCHELL, GRANT A. 1247 2074 2592
MITCHELL, JANE A. 2977
MITCHELL, L. BRENT 2322
MITCHELL, LESLIE A. 1836
MITCHELL, LISA M. 3742
MIYAMOTO, NEIL G. 1248 3496
MOASE, CONNIE E. 3549
MOFFAT, MARGARET P. 1249 2801
MOFFATT, MICHAEL E.K. 1040
MOGENSON, GORDON J. 1250
MOGER, WILLIAM H. 1251
MOGHAL, NADEEM 3550
MOLDAY, ROBERT S. 1252 2173 3442 3443
MOLDOFSKY, HARVEY 3859
MOLINA, THIERRY J. 2978
MOLINA-NEGRO, PEDRO 0509
MOLOTCHNIKOFF, STEPHANE 1253
MOMPARLER, RICHARD L. 2395
MONCADA, SALVADOR 3204
MONGRAIN, MYRIAM 3551
MONTAGUE, TERRENCE J. 2310
MONTBRIAND, MURIEL J. 3552

MONTGOMERY, JANE A. 2979
MONTMINY, MARC R. 2686
MONTPLAISIR, JACQUES Y. 1254 1255 1256 3249
MONTPLAISIR, SERGE 0435 2171 3341 3477 3543
MOODY-CORBETT, FRANCES L. 1257 2593
MOOKERJEA, SAILEN S. 1258 1259
MOON, RANDALL T. 2896
MOON, YOUNG S. 2738 3735
MOORE, J. TERRY 3553
MOORE, SEAN 1260 2174
MOORE, W. ALLAN D. 3554
MOORJANI, SITAL 1261
MORAIS, REJEAN 1262 3615
MORALES, CARLOS R. 1263
MORAN, GREGORY A. 3470
MORAN, LAURENCE A. 1264 1964
MORASH, BARBARA A. 3555
MORASH, SHERRY C. 2980
MORASSUTTI, DANTE J. 2981
MOREAU, MARC J. 1265
MOREAU, PIERRE 3556
MORENCY, MICHEL A. 3746
MORGAN, A. RICHARD 1266 2075
MORGAN, KENNETH 0719
MORGAN, WILLIAM D. 1267
MORGUNOV, NIKOLAS S. 1268
MORIN, J. DONALD 0528
MORISSET, JEAN 1269 1270
MORISSETTE, NATHALIE 3557
MORITA, TETSUYA 3200
MORLEY, PAUL A. 2982
MORLEY, THOMAS P. 1271
MOROZ, LEONARD A. 1272
MORRIS, ANDREW L. 1832
MORRIS, GERALD P. 1273 3438
MORRIS, MARILYN E. 3014
MORRIS, MARY E. 1274 3057
MORRISH, DONALD W. 1275
MORRISON, JOHN H. 2907
MORROW, GLENN W. 3214 3558
MORROW, ROBERT J. 1276 2303
MORSE, JANICE M. 2269
MORT, JOHN S. 2189 3572
MORTARI, FRANK 2983
MORTIMER, DAVID 1277 1278
MORTOLA, JACOPO P. 1279 2828
MORTON, KATHERINE D. 2984
MOSCARELLO, MARIO A. 1280 2056 2099 2152 2312
MOSCOVITCH, MORRIS 1968 3697
MOSES, RUTH M. 2985
MOSKOWITZ, DEBBIE S. 3590
MOSMANN, TIMOTHY R. 1281 1282
MOSS, THOMAS 1283 2070 2076 2264
MOUNTFORD, CAROLYN E. 2792
MOUTON, CHRISTIAN 1284 2121 2240
MOUTQUIN, JEAN-MARIE 0607 1285 2396
MOWAT, MICHAEL R.A. 0891
MOYER, ANNE E. 3559
MROSOVSKY, NICHOLAS 1286
MUELLER, CHRISTOPHER R. 1287
MUELLER, SUSAN G. 3560
MUI, ALICE L.-F. 3561
MUIR, GILLIAN D. 2986
MUKHERJEE, BARID B. 1288
MULCAHY, ROBERT F. 3695
MULLEN, KATHY T. 1289 2077
MULLER, WILLIAM J. 1290 2078
MULLIGAN, MARTIN E. 1291
MULLIGAN, RICHARD C. 2690
MULLINGTON, JANET M. 3562
MUMBY, DAVID G. 3563
MUNOZ, DAVID G. 1292
MUNOZ, DOUGLAS P. (Queen's) 2271
MUNOZ, DOUGLAS P. (NIH) 2987
MUNZER, J. SCOTT 3564
MURGITA, ROBERT A. 1293 2108 2199
MURIALDO, HELIOS 1294 2096
MURPHY, BEVERLEY E.P. 1295 2446
MURPHY, BRIAN J. 2988
MURPHY, BRUCE D. 1296 1297 2926
MURPHY, DAVID A. 0834
MURPHY, LEIGH C. 1298 3723
MURPHY, LIAM J. 1299 1313 1700 2594 2936
MURPHY, MARY G. 1300 1301
MURPHY, MICHAEL E.P. 3565
MURPHY, PAUL R. 1302 2595
MURPHY, RICHARD A. 2307
MURPHY, ROBERT C. 2832
MURRAY, DAVID 0685
MURRAY, ROBERT G.E. 0986
MURRAY, ROBERT K. 1303
MURRAY, TIMOTHY M. 1304 1305 2397
MUSHYNSKI, WALTER E. 1306 3452
MUSTARD, J. FRASER 1307
MUTCH, W. ALAN C. 1308
NABI, IVAN R. 2989
NACCACHE, PAUL H. 1309 2079 2349
NACHTIGAL, MARK W. 3566
NADEAU, ANDRE 1310
NADEAU, REGINALD A. 1311 1578 2188 2311 2447
NADLER, STEVEN P. 1312
NAGY, JAMES I. 0651 1313 1314 2488 3294 3460 3581
NAHMIAS, CLAUDE 0642
NAIR, N.P. VASAVAN 1315
NAKATSU, KANJI 2175
NALBANTOGLU, JOSEPHINE 1316 2331
NANCE, DWIGHT M. 1317 1318 3712
NANCI, ANTONIO 1319 1729 2080 2241
NANO, FRANCIS E. 2709
NARAYANAN, NJANOOR 1320 2883
NASH, RICHARD A. 2990
NATHANIEL, EDWARD J.H. 1321
NATTEL, STANLEY 1322 1798 2398
NAULT, CHANTAL 3567
NAUS, CHRISTIAN C.G. 1323 2094 2596 3250
NAYLOR, C. DAVID 1082 2369
NAZAR, ROSS N. 1324
NELSON, JAMES F. 1325
NEMER, MONA 0495 2081 2198 2292
NEMETH, SUSAN H. 3568
NEPVEU, ALAIN 2804
NERON, SONIA 3569
NESHEIM, MICHAEL E. 1326 2242
NESPOULOUS, JEAN-LUC 2302 3476
NEUFELD, R.W. JAMES 1327 1921 3534
NEUMAN, RICHARD S. 0156 1328
NEUMANN, A. WILHELM 0465 1329
NEWKIRK, MARIANNA M. 1330
NEWNHAM, PETER J. 3570
NEWSOM-DAVIS, JOHN 2996
NG, KENNETH K.S. 3571
NGAN, BO-YEE 0140
NGSEE, JOHNNY K. 2991
NGUYEN, MAI 2992
NGUYEN, QUANG 3572
NGUYEN, THUY H. 3573
NGUYEN, TIEN TUE 2993
NICKEL, BARBARA E. 2994
NICKEL, JEFFREY C. 2995
NICOLLE, MICHAEL W. 2996
NILES, LENNARD P. 3596
NISBET-BROWN, ERIC R. 1331 2762
NISHIMURA, ERICA 2686
NISHIOKA, YUTAKA 1332
NIZNIK, HYMAN B. 1333 2313
NJAR, VINCENT C.O. 3819
NOBREGA, JOSE N. 1334
NOEL, GILLES 2997
NOEL, JOSETTE 3574
NOHR, CARL W. 2287
NORENBERG, MICHAEL D. 2719
NORMAN, MARGARET G. 1339
NORTHUP, JOHN K. 2977
NOSEWORTHY, JOHN H. 1335
NOUJAIM, ANTOINE A. 2390
NOURAINI, SHAHRZAD 3575
NOVAS-SCHMIDT, MARIA L. 2998
NUWAYHID, BAHIJ S. 1472
NWAESEI, CHUKWUMA G. 2396

INDEX

O'BRIEN, PETER J. 1336 2243
O'BRIEN, TERESA B. 3576
O'BRODOVICH, HUGH M. 2315
O'BYRNE, PAUL M. 0422 1337 2489 2950
O'CONNOR, ANNETTE M. 2270
O'CONNOR, TIMOTHY P. 2999
O'CONNOR, TRACY J. 3577
O'DONNELL, MICHAEL E. 2829
O'DOWD, BRIAN F. 2313
O'DRISCOLL, SHAWN W. 1338 2597
O'KUSKY, JOHN R. 1339 2305 2598
OAKLEY, CAROL 3183
OCHI, ATSUO 3463
OFOSU, FREDERICK A. 0812 2084
OGBORN, MALCOLM R. 0403 2355
OGILVIE, RICHARD I. 1340
OHASHI, PAMELA S. 3000
OHMAN, DENNIS E. 3159
OKEY, ALLAN B. 1341 2082 3049
OLIVE, PEGGY L. 0316 1342 3119
OLIVIER, MARTIN 3001
OLIVIER, PATRICK 0246
OLIVIERI, NANCY F. 1343
OLLEY, PETER M. 1344
OLLO, ROGER 2956
OLNEY, SANDRA J. 1345 1993 2321 2399
OLSON, DAVID M. 2274
ONG, BILL Y. 1346
ONG, CHRISTOPHER J. 3578
ONG, HUY 0433 1347 2083 2292 3235 3623
OPAS, MICHAL J. 1348 2061 2599
OPLETA-MADSEN, KAREN L. 3002
OPPENHEIMER, JACK H. 3055
OPPENHEIMER, LUIS 1349
OREOPOULOS, DIMITRIOS G. 2377
ORLOWSKI, JOHN 3003
ORR, F. WILLIAM 1350 1351 2084
ORR, JAMES C. 1352
ORR, JAMES M. 0003
ORREGO, HECTOR 0284 0864
ORSER, BEVERLEY A. 3004
OSHIMA, ROBERT G. 2716
OSMOND, DENNIS G. 1353 2176 3043
OTIS, MARIE-FRANCE 3579
OTTAWAY, CLIFFORD A. 1354
OTTENSMEYER, F. PETER 1355 1356 3454
OTULAKOWSKI, L. GAIL 3005
OULTON, MARGARET R. 1357 2093
OVERALL, CHRISTOPHER M. 2687
OWENS, TREVOR 1358 2600
OZOLS, DINA Y. 3580
PACE-ASCIAK, CECIL R. 1359 1360 3482
PACHAL, RICHARD G. 3215
PACK, ALLAN I. 2666
PACKHAM, MARIAN A. 1361
PADMORE, RUTH F. 3006
PADUA, RODOLFO A. 3581
PAES, BOSCO A. 0065
PAETKAU, VERNER H. 1362
PAETSCH, PAUL R. 3582
PAGE, GORDON G. 2339
PAGE, MICHEL 2400 3410
PAGE, PIERRE L. 2311
PAHAPILL, PETER A. 3583
PAIEMENT, GUY D. 2386
PAIEMENT, JACQUES M. 1363
PAIGE, CHRISTOPHER J. 1364 3079
PAINTER, ROBERT H. 1365
PALCIC, BRANKO 1366
PALMER, FREDERICK B.ST.C. 1367 2288
PALMER, MATTHEW R. 2285
PALMOUR, ROBERTA M. 0750
PALYLYK, EUGENIA L. 3584
PANAGIA, VINCENZO 1368 2970
PANDE, SHRI V. 1369
PANG, CATHERINE C.Y. 1370
PANG, CHO Y. 1371 2902
PANG, K. SANDY 1372 1373 2244 3860
PANG, PETER K.T. 2663
PANG, STEPHEN C.-N. 0592 1374 3692
PANISSET, MICHEL 3201
PANOS, ANTHONY 3007
PAPAGEORGIS, DEMETRI 3301
PAPPIUS, HANNA M. 1375
PAQUET, MICHEL R. 1376 3686
PAQUETTE, BENOIT 3585
PARADIS, JEAN 3008
PARADIS, KHAZAL J.-G. 2013 2419
PARANCHYCH, WILLIAM 1377 3491 3517
PARASKEVAS, FRIXOS 2123
PARDY, RICHARD L. 2085
PARE, DENIS 3009
PARE, MARTIN 3586
PARE, PETER D. 1378 2085
PARENT, ANDRE 1379 2177
PARENT, LUCIE 3010
PARFREY, NOLLAIG A. 1380
PARHAD, IRMA M. 1381 2490 3660
PARKER, JOHN D. 3011
PARKER, JOHN O. 2408
PARKER, PHILIP A. 1382 1654
PARKER, SANDRA E. 3587
PARKER, THOMAS G. 3012
PARKIN, NEIL T. 3013
PARKINSON, FIONA E. 3202
PARPIA, SALVINAZ H. 3014
PARRY, DAVID J. 1383
PASLOSKE, BRITTAN L. 3015
PASTAN, IRA H. 2789
PASTERNAK, STEPHEN H. 3588
PASUTTO, FRANCO M. 1384
PATE, BRIAN D. 2285 2329
PATEL, PRAVIN C. 1261
PATEL, VIMLA L. 2341
PATEL, YOGESH C. 1385 1386 2086 2189
PATER, ALAN 1387 1388 2245
PATER, JOSEPH L. 2321 2401
PATER, MARY M. 1387 1388 2246
PATERSON, ALAN R.P. 1389
PATERSON, ALEXANDER H.G. 1460
PATERSON, JEAN A. 1390
PATERSON, MALCOLM C. 1391 2809 3383
PATERSON, NIGEL A.M. 1392
PATERSON, WILLIAM G. 1393
PATO, MARY D. 1394 2247
PATON, EUGENIA B. 3842
PATRICK, JOHN 3426
PATRICK, JOHN E. 3657
PATTERSON, G. ALEXANDER 1395 3134
PATTINSON, HOWARD A. 1278
PAUL, LEENDERT C. 3195
PAUL, TERRI L. 3016
PAULIN-LEVASSEUR, MICHELINE 1396
PAWSON, ANTHONY J. 1397 2859 2929 3467
PAYET, MARCEL DANIEL 1398 2031 2087
PEAR, JOSEPH J. 3287
PEARLMAN, RONALD E. 1399
PEARSON, KEIR G. 1400 2318 3044
PEDERSON, RAYMOND A. 2273
PEDNEAULT, LOUISE 3017
PEELING, W. JAMES 1429 2922
PEGG, ANTHONY E. 3036
PELECH, STEVEN D. 1401 2601
PELLETIER, ALEX 3589
PELLETIER, GEORGES 2277 3527
PELLETIER, JEAN-PIERRE 1402
PELLETIER, JERRY M. 3018
PELLETIER, NICOLAS 3019
PELZER, DIETER J. 2248
PELZER, SIEGRIED 2248
PENCHARZ, PAUL B. 1403 1404 3319
PENG, LIANG 3020
PENN, ANDREW M.W. 3021
PENNEFATHER, PETER S. 1405 1406 2272
PEPPLER, MARK S. 1407 2207
PERDUE, MARY H. 1408
PERETZ, ISABELLE 2302 3476 3516
PERREAULT, CLAUDE 3278
PERREAULT, JEAN-PIERRE 3022
PERREAULT, PAUL 3023

PERROT, STEPHEN B. 3590
PERRY, MARC D. 3024
PERRY, THOMAS L. 1409
PETERS, KENNETH W. 3591
PETERS, TERENCE M. 2145
PETERSEN, NILS O. 1410
PETERSON, ALAN C. 2744
PETERSON, LINDA N. 1411
PETERSON, THERESA C. 1412 2093
PETKOVICH, P. MARTIN 1413 2602
PETRIC, MARTIN 2301
PETRIDES, MICHAEL 2297
PETROF, BASIL J. 2666
PETTIGREW, NORMAN M. 2123
PETTY, ROSS E. 1414
PEWARCHUK, WILLIE J. 3025
PEYRONNARD, JEAN-MARIE 2126
PHAROAH, MICHAEL J. 2308
PHELPS, DALE L. 3029
PHILIPPE, ERIC 1415 2177
PHILLIPS, ANTHONY G. 2293
PHILLIPS, M. JAMES 1416 2178
PHILLIPS, MICHAEL C. 3093
PHILLIPS, NIGEL C. 1069 1417 2603
PHILLIPS, ROBERT A. 1418 3092 3163
PHILLIPS, SUSANA M. 3592
PHILLIPS, THOMAS W. 1419 1420
PHILLIPSON, ELIOT A. 1421
PHILP, RICHARD B. 1422
PHIPPS, BARRY M. 3026
PHIPPS, DAVID J. 3593
PICARD, LYNE 3594
PICARD, MICHEL 1423
PICARD, NATHALIE 3595
PICCARDO, C. PEDRO 3027
PICHORA-FULLER, M. KATHLEEN 3028
PICKERING, DARRYL S. 3596
PICTON, TERENCE W. 1424
PIEDBOEUF, BRUNO 3029
PIERCE, GRANT N. 1425
PIERS, KEVIN L. 3597
PIERSON, ROGER A. 2249
PIGGINS, HUGH D. 3598
PIHL, ROBERT O. 1426 3424 3667
PIKE, G. BRUCE 3030
PILARSKI, LINDA M. 1427 1428 2179
PILLIAR, ROBERT M. 2308 2708
PIND, STEVEN N. 3031
PINEL, JOHN P.J. 3563
PINKERTON, PETER H. 0140
PINSKY, CARL 1429
PINSKY, LEONARD 2280
PIQUETTE-MILLER, MICHELINE R. 3599
PISA, MICHELE A. 2115
PITTMAN, QUENTIN J. 1130 1430 2491 3035 3152
PLAA, GABRIEL L. 1431
PLANTE, CLAIRE 3032
PLANTE, JULIE 3600
PLEWES, DONALD B. 1432
PLOURDE, PIERRE J. 3033
PLUMMER, FRANCIS A. 2335 2604 3033 3126
PODESTA, RONALD B. 1433 2309
PODGORSAK, ERVIN B. 1434
PODOR, THOMAS J. 1351
POIRIER, DONALD 3034
POIRIER, GUY G. 1435
POIRIER, JUDES 2605
POITRAS, PIERRE 1436
POLIMENI, PHILIP I. 1437
POLLAK, P. TIMOTHY 2650
POLLOCK, ROBIN 3601
POLOSA, CANIO 1438
POLYAK, STEPHEN J. 3602
POLYCHRONAKOS, CONSTANTIN 1439
POMERANTZ, DAVID K. 1440
POMIER-LAYRARGUES, GILLES 2298 2351
PON, RICHARD T. 2180
PONKA, PREMYSL 1441 1644
POOLE, A. ROBIN 1442 1443 2189
POOLE, R. KEITH 1444
POPOVIC, DEJAN B. 2318
POPPEMA, SIBRAND 2389
PORTER, ARTHUR T. 0562
PORTER, DUNCAN W.F. 3035
POSNER, BARRY I. 1445 2088 2402
POSNICK, JEFFREY C. 2403
POSSMAYER, FRED 2274 3305
POST, MARTIN 1446 2315
POTIER, MICHEL L. 1447 1448 2074 2181 3905
POTTER, SUSAN M. 3603
POUBELLE, PATRICE E. 1449
POULIN, DANIEL 3604
POULIN, RICHARD 3036
POULIOT, JEAN-FRANCOIS 3605
POUSSIER, PHILIPPE G.A. 1450 2071 2606
POUYSSEGUR, JACQUES 2685 2971
POWELL, WILLIAM S. 1166 1451 2089 2182 2183 3698
POWER, CHRISTOPHER N. 3037
POZNANSKY, MARK J. 1452
PRABHAKARAN, VICTOR H. 1891
PRATO, FRANK S. 1453 3295 3679
PREDA, ISTVAN 3843
PREDY, D. RANDALL W. 3216
PREIKSAITIS, HAROLD G. 3203
PREIKSAITIS, JUTTA K. 1454 2207
PRESTWICH, PATRICIA E. 2342
PREVEC, LUDVIK A. 1455 2407
PREWITT, RICHARD M. 1456
PRICE, COLIN 1457
PRICE, GERALD B. 1458 3337
PRICHARD, ROGER K. 1459
PRIESS, JAMES R. 2867
PRITCHARD, KATHLEEN I. 1460
PRITCHARD, P. HAYDN 1461 2138
PRITZKER, KENNETH P.H. 1462
PROCHAZKA, ARTHUR 2318
PROKIPCAK, REBECCA D. 3038
PROKOPIW, IGOR 1463
PROSS, HUGH F. 1464 2090 2162
PROSSER, DAVID E. 3217
PROULX, CHANTAL 3606
PROULX, PIERRE R. 1465
PROVOST, PATRICK 3607
PROVOST, SYLVIE 3608
PRUD'HOMME, GERALD J. 2295 2296 2607 3691
PRUZANSKI, WALDEMAR 2404
PRYZDIAL, EDWARD L.G. 3039
PTASHNE, MARK S. 2679
PUIL, ERNEST 1466
PULLEYBLANK, DAVID E. 1467 3397
PUTMAN, CHARLES T. 3609
PUTNINS, EDWARD E. 3184
PUYMIRAT, JACK 0518
QIU, RONG 3040
QUACKENBUSH, SUSIE J. 3610
QUAMME, GARY A. 1468 2091 2184
QUAN, FRANKLIN 3041
QUASTEL, DAVID M.J. 1469
QUENNEVILLE, LOUISE A.M. 3611
QUIK, MARYKA 1470 1471 3388
QUILLEN, EDMOND W., JR. 1472
QUINSEY, VERNON L. 3440
QUIRION, REMI 1473 2316
QUIRK, KEITH C. 0334
QURESHI, IJAZ A. 1474
RABBANI, SHAFAAT A. 1475
RABINOVITCH, MARK A. 1476
RABINOVITCH, MARLENE 1477 3273
RABKIN, SIMON W. 1478 2405
RACHER, KATHLEEN I. 3612
RACHMAN, S. JACK 3508
RACHUBINSKI, RICHARD A. 1479 2608 3265 3398
RACZ, WILLIAM J. 1480
RADDE, INGEBORG C. 0980
RADICS, LAJOS R. 3820
RADOUX, VICTOR M. 3042
RADZIOCH, DANUTA 1481
RADZIUK, JERRY M. 1482 2250 3630
RAESIDE, JAMES I. 1483
RAFFERTY, STEVEN P. 3613

INDEX

RAHAL, M. DWAYNE 3043
RAJABI, MOHAMMAD R. 1484
RAJARAMAN, RENGASWAMI 2185
RAJOTTE, RAYMOND V. 1485 2780
RAKUSAN, KAREL J. 1486
RAMIREZ, JAN-MARINO 3044
RAMSDEN, MICHAEL F. 2368
RANCOURT, DERRICK E. 3045
RANGACHARI, PATANGI K. 1487 1488
RANGNO, ROBERT E. 3199
RAO, LETICIA G. 1304 1305 2397
RASIO, EUGENIO 1489 1490
RASMINSKY, MICHAEL 1491 3131
RASMUSSEN, HOWARD 2977
RASMUSSON, DOUGLAS D. 1492
RASO, V. JAMES 1265
RASSART, ERIC 1493 1494 2304
RATCLIFFE, MICHAEL J.H. 1495
RATTNER, JEROME B. 2186
RAUCH, JOYCE 1496
RAUTAHARJU, PENTTI M. 2310 2448
RAUTH, A. MICHAEL 1497
RAY, PETER N. 1988 2889
RAYMOND, MARTINE 3614
RAYMOND, MICHAEL J. 1104
RAYMOND, PHILIPPE 3615
RAYMOND, VINCENT 1180 1498
RAYMOND, YVES 1499 2110
RAYNER, DAVID C. 1500 2123
READ, RANDY J. 1501 2406
READ, RONALD R. 3046
READ, STANLEY E. 2369
READER, TOMAS A. 1502 3530
REBEYKA, IVAN M. 1503
RECHLER, MATTHEW M. 2727
RECTOR, EDWARD S. 2123
REDFIELD, ROSEMARY J. 1504
REEDER, RONALD H. 2903
REEVES, RICHARD A. 2651
REGAN, DAVID M. 1505
REGOECZI, ERWIN 1506 2449
REGOLI, DOMENICO C. 1507 2092 2450 3747
REH, THOMAS A. 1508
REID, BRIAN K. 3616
REID, DAVID W. 3413
REID, GREGOR 1509
REID, ROBERT L. 1510 2251
REID, RONALD E. 1511 1512
REIFFENSTEIN, RHODERIC J. 3468
REINER, NEIL E. 1513 3001
REINER, PETER B. 1514 2609 3336
REINIS, STANISLAV 3710
REIS, MARCIANO D.O. 0140
REITHMEIER, REINHART A.F. 2282 3296 3480
REMICK, RONALD A. 0333 2023
REMMERS, JOHN E. 1515
RENAUD, LEO P. 1516 3102
RENIER, GENEVIEVE 3047
RENNIE, PAUL S. 1517
RENNIE, ROBERT P. 2187
RENTON, KENNETH W. 1518 2093 2355 2773 3283
RENZI, PAOLO M. 1164
RESETKOVA, ERIKA 3048
REUDELHUBER, TIMOTHY L. 1519 2509
REYNOLDS, CATHERINE A. 3617
REYNOLDS, JAMES N. 1520
REYNOLDS, JOHN D. 1521 2845
RICHARD, MANON 3618
RICHARD, STEPHANE 3619
RICHARDS, JAMES F. 1522
RICHARDS, JOANNE S. 3083
RICHARDSON, BRYAN S. 2274 2768
RICHARDSON, CHRISTOPHER D. 1523
RICHARDSON, PETER M. 1524
RICHARDSON, SUSAN E. 2301
RICHARDSON, THOMAS L. 1525
RICHARDSON, VERNON J. 1526
RICHER, FRANCOIS 1606 3224 3249
RICHMAN, JOY M. 3165
RICHMOND, FRANCES J.R. 1527 2271
RIDDICK, DAVID S. 3049 3620
RIDGWAY, NEALE D. 2688
RIDSDALE, J. ANDREW 3050
RIEDER, MICHAEL J. 1528 2652
RIESS, OLAF 3844
RIGATTO, HENRIQUE 1529
RIGBY, PETER W.J. 2701
RIGGS, K. WAYNE 0072 2284
RILEY WATSON, DOONE P. 3051
RINI, JAMES M. 2689
RIOPELLE, RICHARD J. 1530
RIORDAN, JOHN R. 1531 1532 3191 3386
RIOUX, FRANCIS R. 1533
RIP, JACK W. 1534
RISAU, WERNER 2814
RITCHIE, J.W. KNOX 1030 1535 2303
RITTENHOUSE, SUSAN E. 3090
RITTMASTER, ROGER S. 1536
RITVO, PAUL G. 1863
RITZ, JEROME 2790
RIVEST, SERGE 3052
RIVIER, CATHERINE L. 3052
ROACH, ARTHUR H. 1537 2312 2610 2691
ROACH, MARGOT R. 1538
ROAD, JEREMY D. 1539
ROBAIRE, BERNARD 0739 1540 1541 2137 3190 3694
ROBERGE, FERNAND A. 2188 2311
ROBERTS, DAVID C.S. 1542
ROBERTS, EVE A. 1543 1544
ROBERTS, JACQUELINE G. 1931
ROBERTS, KENNETH D. 2286 2451
ROBERTS, R. MICHAEL 2776
ROBERTS, ROBERT 3012
ROBERTS, ROBIN S. 0380 0381 2352
ROBERTSON, ANN 3637
ROBERTSON, GEORGE S. 3053
ROBERTSON, HAROLD A. 1545 1546
ROBERTSON, JANET A. 1547 2207
ROBERTSON, R. MELDRUM 2271
ROBICHAUD, ANNETTE 3621
ROBINSON, BRIAN H. 1548 2815
ROBINSON, DAVID B. 3622
ROBINSON, GILBERT B. 1549
ROBINSON, JOHN J. 1550
ROBINSON, WILLIAM S. 3075
ROBITAILLE, RICHARD 3054
ROCHET, ANNE P. 1551
ROCHON, FERNANDE D. 2343
ROCHON, JAMES 2392
RODD, CELIA J. 3055
RODER, JOHN C. 1552 2312 2492 2664 2677 2691 2835 3705
RODIN, JUDITH 3559
RODRIGUEZ, MIGUEL A. 1553
RODRIGUEZ-BOULAN, ENRIQUE 2989
ROEDERER, GHISLAINE O. 1025
ROESCH, RONALD 3720
ROESLER, WILLIAM J. 2252
ROGERS, JAMES A. 1554 3861
ROGERS, JOHN C. 2864
ROGERS, KEM A. 1555 2094
ROIFMAN, CHAIM M. 2169
ROLA-PLESZCZYNSKI, MAREK 1556 1557 2087 3381
ROMASCHIN, ALEXANDER D. 1558
ROMMENS, JOHANNA M. 3056
ROMPRE, PIERRE-PAUL 1559 3275
RONALD, ALLAN R. 2335
RONCARI, DANIEL A.K. 1560
RONDEAU, JEAN-JACQUES 3623
ROOTMAN, DAVID S. 1561 1851
RORABECK, CECIL H. 0575 1033 1562 2294 2386
RORSTAD, OTTO P. 1563
ROSBASH, MICHAEL 2805
ROSE, ANN M. 1564 3540 3591
ROSE, COLIN P. 0690
ROSE, P. KENNETH 1565 2095 2271
ROSEN, ANDREI S. 3057
ROSEN, CHERYL F. 1566
ROSEN, RIMA 2280

ROSENBERG, ALAN M. 1567
ROSENBERG, LAWRENCE 1568 2611
ROSENBERG, ROBERT D. 2706
ROSENBLATT, DAVID S. 2280 3076 3511
ROSENBURG, ROBERT D. 2693
ROSENFELD, MICHAEL G. 2673 2796
ROSENFELD, RON G. 2788
ROSENTHAL, KENNETH L. 1455 1569 2148 2407 3580
ROSS, DANIELLE S. 3624
ROSS, JEFFREY 3038
ROSSANT, JANET 1570 2766 2860 3280 3321
ROSSIGNOL, SERGE 2278 2909 3066
ROTH, JACK A. 2750
ROTH, SHELDON H. 1571
ROTHSTEIN, ASER 1572
ROTHWELL, NANCY J. 2959
ROTIN, DANIELA 3058
ROTSTEIN, ORI D. 1573 2906 3104
ROTTAPEL, ROBERT K. 3059
ROTTMAN, FRITZ 3080
ROUGHLEY, PETER J. 1443 1574 2189 2493 3572 3672
ROULEAU, GUY A. 1575 2612 3324 3906
ROULEAU, JACQUES R. 1576 1577
ROULEAU, JEAN-L. 1578 2408 2410
ROULEAU, MICHELE 3625
ROURKE, BYRON P. 3377
ROUSSEAU, ERIC C. 1579 2031 2087
ROUSSEAU, FRANCOIS 3060
ROUSSEAU-MIGNERON, SUZANNE 1310
ROUSSOS, CHARIS S. 1580
ROVET, JOANNE F. 0758
ROWDEN, GEOFFREY 1581 2190
ROWLANDS, JOHN A. 1582 1583
ROWLEY, ADELE 3626
ROY, CLAUDE C. 1584
ROY, DENIS R. 1585
ROY, JEAN-PAUL 2191
ROY, JEAN-PIERRE 1586
ROY, PAUL-EMILE 0725 2191 2365
ROY, PAUL H. 1587 3589
ROY, RAYNALD 0725 1588 1844
ROYAL, ANDRE 1589 2110 3331
ROZAKIS, MARIA 3627
ROZEN, RIMA 3511
RUBIN, BARRY B. 3061
RUBIN, LAURENCE A. 1590
RUDAN, JOHN F. 2321
RUDD, NOREEN L. 1591
RUEDY, JOHN 3344
RUUS, THEODORA C.G. 3062
RUIZ-CARRILLO, ADOLFO 1592 2253 2838 3310
RUIZ-PETRICH, ELENA 1593
RURAK, DANNY W. 0072 1594 1595 2284 3728
RUSAK, BENJAMIN 1596
RUSE, N. DORIN 3063
RUSH, DAVID N. 2123
RUSSELL, ANTHONY S. 0874
RUSSELL, JAMES C. 2192
RUSSNAK, ROLAND H. 3064
RUSSON, ANNE E. 3351
RUTH, THOMAS J. 2285 2329
RUTHERFORD, JOHN G. 0735
RUTT, BRIAN K. 1597 2409 3650
RUZICKA, BIANCA B. 3628
RUZSICSKA, BELA P. 1598 2613
RYALLS, JOHN H. 2302
RYAN, AIMEE K. 3629
RYAN, COLLEEN 3630
RYAN, EDMOND A. 1599
RYAN, PAULA P. 3631
RYLETT, R. JANE 1600 1601
SABBADINI, EDRIS R. 2123
SABRY, JAMES H. 3065
SACKS, STEPHEN L. 1602
SADELAIN, MICHEL W.J. 2690
SADOWSKI, IVAN J. 1603
SADOWSKI, PAUL D. 1604 2096 3472 3531
SAIBIL, FRED G. 1683
SAIGAL, SAROJ 2396
SAINT-CYR, JEAN A. 1605
SAINT-HILAIRE, JEAN-MARC 1606
SAIRAM, MALUR R. 1607 1608 2097
SALERNO, TOMAS A. 1082 1609 1610 3007
SALTER, MICHAEL W. 2691
SALTER, ROBERT B. 1611
SALTIEL, PHILIPPE 3066
SAMBHARA, SURYAPRAKASH R. 3067
SAMPALIS, JOHN S. 2345
SANCHE, LEON 2279
SANDERS, ESMOND J. 1612 2193
SANDERSON, KELLIE E. 3632
SANDHAM, H. JAMES 1613 2098
SANDOR, THOMAS 1614 2452
SANFORD, S. ERNEST 1848
SANKARAN, KORAVANGATTU 0809
SANTOR, DARCY A. 3633
SANWAL, BISHNU D. 1615 1616 3439
SARFATI, MARIE 0442 1617 2614 3371
SARID, JACK 2660
SARKAR, BIBUDHENDRA 1618 2099 2135 3425
SAS, EMILIA 1139
SASTRY, BHAGAVATULA R. 1619
SASYNIUK, BETTY I. 1620
SAUDER, DANIEL N. 1621
SAUNDERS, JOHN K. 2922
SAUVE, REGINALD S. 2396
SAUVE, REMY 1622 2066 3346
SAVARD, PIERRE (Montréal) 1578 2311 2410
SAVARD, PIERRE (Laval) 1623 2615 3242
SAWKA, CAROL A. 0140
SAWYER, NICOLE 3634
SAWYNOK, JANA 1624 1625
SAXE, BRENDA J. 3635
SCHACHAR, NORMAN S. 1626
SCHACHAR, RUSSELL 1627
SCHACHTER, HARRY 1628 2056 2099 2135
SCHALKWYK, LEONARD C. 3636
SCHALOMON, PETRA M. 3637
SCHANNE, OTTO F.M. 1629
SCHELLENBERG, R. ROBERT 1630 2085
SCHELLER, RICHARD H. 2696 2991
SCHIFFRIN, ERNESTO L. 1631 1632 3161
SCHILDER, ERNA ! 3353
SCHILLER, PETER W. 1633 2100 2194
SCHIMMEL, PAUL 3617
SCHIMMER, BERNARD P. 1634 3040 3724
SCHIPPER, HYMAN M. 1635
SCHLESSINGER, JOSEPH 3058
SCHLICHTER, LYANNE C. 1636 2616 3583
SCHMANDT, ROSEMARIE E. 3638
SCHMIDT, BRIAN J. 1637
SCHNEIDER, BRUCE A. 0581 1842
SCHNEIDER, WOLFGANG J. 1638 2494
SCHNEIDERMAN, JACOB H. 1639
SCHNETKAMP, PAUL P.M. 1640
SCHOLEY, JAMES W. 1641
SCHRADER, JOHN W. 1642 3147
SCHRADER, TIMOTHY J. 3218
SCHREIBER, RICHARD A. 3068
SCHROEDER, HARRY S. 2983
SCHRYVERS, ANTHONY B. 1643 2411
SCHUH, ANDRE C. 2692
SCHULMAN, HERBERT M. 1441 1644
SCHULTZ, GILBERT A. 1645 2101 3144
SCHULZ, RICHARD 3204
SCHULZER, MICHAEL 2285
SCHURCH, P. SAMUEL 1646
SCHURR, ERWIN 1647
SCHWARTZ, CAROL J.E. 3069
SCHWARTZ, JAMES H. 3091
SCHWARTZ, ROBERT S. 3099
SCHWARZ, DIETRICH W.F. 1648 1649
SCHWARZ, ROBERT D. 0489
SCHWEIZER, HERBERT P. 2617
SCOLLAY, ROLAND 2871
SCOTT, J. ELLIOTT 1650
SCOTT, PAUL G. 1651 1652 2102 2195 2749
SCOTT, R. BRENT 1653

INDEX

SCOTT, ROBERT N. 1654
SCRABA, DOUGLAS G. 1655 2196
SCRIVER, CHARLES R. 2182 2183 2280
SCULLY, LINDA J. 0790
SEARGEANT, LORNE E. 0709
SEARLES, GORDON E. 3070
SEBALDT, ROLF J. 2653
SEE, RAYMOND H. 3639
SEELY, JOHN F. 2197
SEEMAN, PHILIP 1271 1656 1657 2313
SEEMAYER, THOMAS A. 1658
SEFTON, MICHAEL V. 1659 1660
SEGAL, BERNARD 1661
SEGALL, JACQUELINE M. 1662 1663 2103 3238
SEGUIN, CARL 1664 1665 2070 2104 2618
SEGUIN, MARIE-CLAUDEL 3640
SEHON, ALEC H. 2123 2281 2758
SEIDAH, NABIL G. 2053 2081 2314 3241 3634
SEIDMAN, ERNEST G. 1666 2851
SEKALY, RAFICK-P. 1667 1668 2081 2198 2619 3341 3406 3474
SEKHON, HARMANJATINDER S. 3071
SELAND, THOMAS P. 1335
SELIN, LIISA K. 3072
SELLS, BRUCE H. 1669
SEMBA, KAZUE 2620
SEN, AMAR K. 2105
SENCIALL, IAN R. 1670
SENECAL, JEAN-LUC 1671
SEOW, CHUN Y. 3073
SERGENT, JUSTINE 1672 2495
SERVOS, PHILIP R. 3641
SESSLE, BARRY J. 1673
SEVERSON, DAVID L. 1674
SHAFER, STEVEN L. 2657
SHAFFER, ELDON A. 1675 2106 2412
SHAIKH, NISAR A. 1676
SHAPIRO, R. JEAN 2054
SHARMA, RAJENDRA K. 1677
SHARP, CECIL B. 3074
SHARP, ROBERT W. 3642
SHARPE, JAMES A. 1678
SHAVER, ALAN 2402
SHAW, CHRISTOPHER 2290
SHEAR, NEIL H. 1679
SHEPCHYK, SUSAN J. 1680 2621
SHEININ, ROSE 1681
SHELDON, KATHERINE M. 3643
SHELDON, ROBERT S. 1682
SHENASA, MOHAMMAD 2311
SHEPPARD, M. SUZANNE 0083
SHERKER, AVERELL H. 3075
SHERMAN, IGOR A. 1683
SHERMAN, MORRIS 1684 2369
SHERMAN, PHILIP M. 1685
SHERWIN, ALLAN L. 1686 2297
SHERWIN, BARBARA B. 1687 3592 3601
SHERWOOD, NANCY M. 1688 2107
SHEVELL, MICHAEL I. 3076
SHEWEN, PATRICIA E. 2765
SHIELDS, EDWARD D. 0719
SHILTON, BRIAN H. 3644
SHIMIZU, KATHERINE Y. 3645
SHIN, SEON H. 1689
SHIRAZI-ADL, ABOULFAZL 1690
SHIROKY, JEFFREY B. 2358
SHIU, ROBERT P.C. 1691 2123 2668 3145 3347 3622
SHIZGAL, HARRY M. 1692
SHIZGAL, PETER 1693
SHORE, GORDON C. 1694 2108 2199 3400 3545
SHRIER, ALVIN 1695
SHRIVE, NIGEL G. 0602
SHULMAN, MARC J. 1696 1697 2096 2656
SHUMAK, KENNETH H. 1335
SHWORAK, NICHOLAS W. 2693 3077
SIBOO, RUSSELL 0307
SIDEROVSKI, DAVID P. 3646
SIDLE, AIKO 3647
SIEGEL, LINDA S. 323[illegible]
SIGMAN, HARVEY H. 2345
SIGURDSSON, STEFAN B. 3821
SILEN, WILLIAM 2839
SILVERMAN, EARL D. 1698 2169
SILVERMAN, MELVIN 2282
SILVIUS, JOHN R. 1699 2496 2622
SIM, DALICE A. 1033 2386
SIMA, ANDERS A.P. 1700 1701
SIMARD, CLERMONT 2191
SIMARD, JACQUES 2277
SIMARD, MARIE F. 3078
SIMARD, STEEVE 3648
SIMINOSKI, KERRY G. 1702
SIMINOVITCH, KATHERINE A. 1703 1704 2779
SIMOES DE BIVAR CUMANO, ANA M. 3079
SIMOLA, SHELDENE K. 3649
SIMON, GERARD T. 1356 2200
SIMONS, F. ESTELLE R. 0103
SIMONSEN, J. NEIL 3080
SIMPSON, CHARLES W. 2249
SIMPSON, NANCY E. 1705
SIMS, STEPHEN M. 1706 2623 2897
SINCLAIR, ALISON 3081
SINCLAIR, JOHN C. 2396
SINCLAIR, JOHN G. 1707
SINCLAIR, NICHOLAS R.ST.C. 1708 2201
SINGAL, DHARAM P. 1709
SINGAL, PAWAN K. 1710 3465
SINGER, GARY G. 3082
SINGER, MICHAEL A. 1711
SINGER, RICHARD A. 0830
SINGER, WILLIAM 0885
SINGH, BHAGIRATH 1712 1713 1714 1715
SINGH, GURMIT 1350 1716 2084
SINGH, SARYU 3650
SINGHAL, SHARWAN K. 1717
SINNETT, DANIEL 3651
SIROIS, JEAN 3083
SIROIS, PIERRE 0733 1718 2413 2497 2786 2819 2824
SITAR, DANIEL S. 2109
SIU, CHI-HUNG 1719 1720 3327
SIU, DAVID W.-H. 2202
SIU, SAMUEL C.B. 3084
SIVAK, JACOB G. 1721
SKAKOON, EILEEN N. 3652
SKAMENE, EMIL 0657 0719 1722 2946
SKANES, VERNA M. 1723
SKEA, DANNA L. 3085
SKERJANC, ILONA S. 3086
SKINNER, FRANCES K. 3653
SKORECKI, KARL L. 2282 3115
SKOV, KIRSTEN A. 1724
SKUP, DANIEL S. 1725 2110 2254 2414 3862
SLATE, R. KENDRICK 2403
SLATER, SUSAN E. 3654
SLONECKER, CHARLES E. 2203
SLUTSKY, ARTHUR S. 1726 2498 2836 3132
SMALLSHAW, JOAN E. 3655
SMART, NORA L. 3087
SMILEY, JAMES R. 1727 1728
SMILLIE, LAWRENCE B. 2276
SMITH, ALLAN M. 2278 3595
SMITH, BARRY T.S. 2315
SMITH, C. WAYNE 2799
SMITH, CAROLYN L. 3656
SMITH, CHARLES E. 1729
SMITH, DENNIS C. 1730 2294 2308 3063
SMITH, GORDON S. 2717
SMITH, GRAEME N. 3657
SMITH, IAN D. 3658
SMITH, ISABEL M. 3659
SMITH, JAMES M. 1459
SMITH, KAREN A. 3660
SMITH, MICHAEL 1731 2138 2328 2453 2687 2932 3446 3494
SMITH, PETER A. 1732 2879 3739
SMITH, RICHARD S. 2707 2454

SMITH, YOLAND 3088
SMYTH, DONALD D. 1733 1734
SNIDER, DENIS P. 1735
SNIDERMAN, ALLAN D. 1736
SNODDY, DANIEL W. 3661
SNUTCH, TERRANCE P. 1737 3096
SNYDER, FLOYD F. 1738 1739 1740
SNYDER, RICHARD E. 1741
SNYDERMAN, RALPH 2972
SOBELL, LINDA C. 3315
SOBELL, MARK B. 3315
SODEK, JAROSLAV 2283 2344 2370 3179 3727
SOJA, PETER J. 2255
SOKOL, PAMELA A. 1742
SOLE, MICHAEL J. 1743 2797
SOLOMON, FRANK 2812
SOLOMON, PETER H. 3089
SOLOMON, SAMUEL 1744 2182 2183 2189 3738 3863
SOLY, ROBERT R.R. 3662
SONENBERG, NAHUM 1745 2046 2069 2111 2189 2499 3262 3323 3375 3389
SONNENBERG, HARALD 1746
SORBIE, CHARLES 2321
SORISKY, ALEXANDER 3090
SOSSIN, WAYNE S. 3091
SOUHAMI, LUIS 1434
SOURKES, THEODORE L. 0467 2415
SPANER, DAVID E. 3092
SPARKS, DANIEL L. 3093
SPEARMAN, MAUREEN A. 3094
SPEERT, DAVID P. 1747
SPENCE, ANDREW M. 1748
SPENCE, MATTHEW W. 2288 2455
SPENCER, JOHN H. 2112
SPIEGELMAN, GEORGE B. 1749 1750 3215
SPIELBERG, STEPHEN P. 1751
SPINO, MICHAEL 1752
SPREEN, OTFRIED 3512
SQUIRES, PATRICIA M. 3663
SRIGLEY, JOHN R. 0140
SRIKANT, COIMBATORE B. 2086 2624
SRIVASTAVA, ASHOK K. 1753
ST. AMAND, JANET L. 3666
ST. JOHN SUTTON, MARTIN G. 3011
ST-LOUIS, JEAN 1754
ST-PIERRE, BENOIT 3664
ST-PIERRE, DIANE M.M. 1755
ST-PIERRE, SERGE A. 2045 2316
ST-PIERRE, YVES 3665
STAINES, WILLIAM A. 1756 2625
STALKER, MARGARET J. 3095
STAM, HENDERIKUS J. 3529
STAMBROOK, MICHAEL 3554
STANISZ, ANDRZEJ M. 1757 2148
STANKOVA, JANA 1557
STANNERS, CLIFFORD P. 1831 2046 2189 2317 2658 3271
STANSKI, DONALD R. 2657
STARR, TERENCE V.B. 3096
STEEVES, JOHN D. 1758 2986
STEIN, RICHARD B. 2318
STEINBERGER, ITZHAK T. 3822
STEINBRECHER, URS P. 0790 1759 2054 2136
STEINER, GEORGE 1760
STEINER, MEIR 0581
STEINHART, A. HILLARY 3097
STEINMULLER, DAVID 2703
STELL, WILLIAM K. 1761 1762
STEMMER, BRIGITTE E. 3098
STEPHENS, NEWMAN L. 1763 2882
STERIADE, MIRCEA 1764
STEVENS, JOHN K. 1765 2204 3535
STEVENSON, BRUCE R. 1766 2626
STEVENSON, MARY M. 1767
STEWART, A. KEITH 3099
STEWART, DUNCAN J. 1768 1769 2410
STEWART, JANE 1770
STEWART, LAURA C. 3100
STEWART, PATRICIA A. 1771 1772 2061 3437
STEWART, RICHARD C. 1773 2627
STEWART, SHERRY H. 3667
STEWART-PHILLIPS, JEAN L. 1774
STILES, CHARLES D. 3141
STILLER, CALVIN R. 3016
STINSON, ROBERT A. 1775
STOESSL, A. JONATHAN 1776
STOLAR, MARGUERITE A. 0010
STOLTZ, DONALD B. 1777 2146
STONE, LISA A. 3668
STORB, RAINER 2990
STRASBERG, STEVEN M. 0775
STRATHDEE, CRAIG A. 3101
STREJAN, GILL H. 1778 2309
STRICKLAND, KENNETH P. 1779 2456
STROINK, GERHARD 1780 2310
STROMINGER, JACK L. 3042
STUMPF, ERIKA 3669
STUSS, DONALD T. 3402
STUTTARD, COLIN 1781 3524
SUH, MARTHA H.J. 1782
SUISSA, SAMY 2358
SULAKHE, PRAKASH V. 1205 2113
SULLIVAN, ARTHUR K. 1783
SULLIVAN, MARGARET J. 3102
SUN, ANTHONY M. 1784
SUN, YING 1785 2628
SURANYI-CADOTTE, BARBARA E. 1786
SURESH, MANVUR R. 0158
SURPRENANT, ANNMARIE 2699
SUSSEX, BRUCE A. 2408 2410
SUTHERLAND, D. ROBERT 0082
SUTHERLAND, GARNETTE R. 1429 2922
SUTHERLAND, LLOYD R. 0790 2393
SUTHERLAND, MAY S. 3205
SUTHERLAND, ROBERT J. 1787
SUTOW, ELLIOTT J. 2300
SUTTON, ROGER A.L. 1788
SUZUKI, SHINGO 3103
SVENDSEN, PIA C. 3670
SWALLOW, CAROL J. 3104
SWEENEY, MARVA I. 3105
SWINDALE, NICHOLAS V. 1789
SWINSON, RICHARD P. 0334
SYGUSCH, JURGEN 1790 2114
SYKES, BRIAN D. 2276 3288
SYMINGTON, JOHN M. 2416
SYMONS, LAWRENCE A. 3671
SZAREK, WALTER A. 1791 2382
SZECHTMAN, HENRY 1792 2115
SZERB, JOHN C. 1793 2813
SZEWCZUK, MYRON R. 2162
SZOSTAK, CAROLYN M. 3106
SZTROLOVICS, ROBERT 3672
TABRIZCHI, REZA 3107
TACHE, RICHARD 2360
TACKABERRY, EILLEEN S. 3673
TAGUCHI, KENNETH 1464
TAI, JOSEPH Y.C. 1867
TAKEI, FUMIO 1794 1795 3293
TAKETO-HOSOTANI, TERUKO 1796 1797
TALAJIC, MARIO 1798 2410
TALBOT, PIERRE 1799
TAM, PATRICK 3674
TAM, YUN K. 1800 1801
TAMAOKI, TAIKI 1802
TAN, LIAT 1803
TANCO, SHERYL A. 3675
TANCREDI, VIRGINIA 3836
TANGUAY, ROBERT M. 1804 1805 2319 3325
TANNENBAUM, GLORIA S. 1806
TANNOCK, IAN F. 1807 2735
TANPHAICHITR, NONGNUJ 1808
TANSWELL, A. KEITH 1809
TARDIF, DOMINIQUE 3676
TASKER, RICHARD A.R. 1810
TATOR, CHARLES H. 1811 2873 3125
TATTON, WILLIAM G. 1812 2957
TAUNTON, JACK E. 2964
TAWASHI, RASHAD K. 1813
TAYLOR, C. RICHARD 3146
TAYLOR, D. WAYNE 2336

INDEX

TAYLOR, DIANE E. 1814 2207 3570 3703
TAYLOR, LINDA M. 3186
TCHAKAROV, LIOUBEN E. 3108
TEARE, GARY F. 3109
TEH, HUNG-SIA 1815
TEMPLETON, DOUGLAS M. 1816 2629
TEMPLETON, JOHN F. 1817 1818
TEN ~ATE, A. RICHARD 2205
TENENBAUM, HOWARD C. 1819 1820
TENENBAUM, JERRY 1030
TENENHOUSE, HARRIET S. 2280
TENER, GORDON M. 1821 2457
TENNISWOOD, MARTIN P.R. 1822 1823 1824 3478
TEPPERMAN, BARRY L. 1825
TETREAULT, LEON 1112
TETZLAFF, WOLFRAM G. 1826 2630
THAKER, AJAYKUMAR J. 3219
THEODORESCU, DAN 3110
THERIAULT, GERMAIN 0190
THEROUX, PIERRE 2343
THERRIEN, MARC 3677
THIBAULT, GAETAN 2275
THIBAULT, MARIE-CHRISTINE 0190
THIESSEN, JAKE J. 1752 1827
THIRION, JEAN-PAUL 2208
THLIVERIS, JAMES A. 0545 2000
THOMAS, DAVID Y. 2669
THOMAS, JOHN B. 2949
THOMAS, K. FLORIAN P. 3111
THOMASSIN, HELENE D. 3112
THOMPSON, CHRISTOPHER J. 2206 2297
THOMPSON, DAVID M. 1828
THOMPSON, DEBORAH A. 3678
THOMPSON, MARGARET W. 1988
THOMSON, ALAN B.R. 1829 1830
THOMSON, DAVID M.P. 1831 2189
THOMSON, IAN R. 1832
THORBURN, MARGARET A. 3109
THORNER, PAUL S. 0096
THORNHILL, JAMES A. 1833 2256
THURLBECK, WILLIAM M. 1834 3071
TIBERI, MARIO 3113
TICKLE, CHERYLL 3185
TILCOCK, COLIN P.S. 1835 2631
TIMNEY, BRIAN N. 3671
TINGLE, AUBREY J. 1836
TISCH, ROLAND M. 3114
TKACHUK, DOUGLAS C. 2694
TOBE, SHELDON W. 3115
TODD-POKROPEK, ANDREW 2361
TOLIAS, PETER P. 2695
TOMKINS, ANDREW 2820
TOMKINS, DARRELL J. 3225
TOMLINSON, R. DAVID 1837
TOMPKINS, LUCY S. 2843
TONG, EDWARD C.Y. 3679
TONIN, PATRICIA N. 3116
TONN, GEORGE R. 3680
TONZETICH, JOSEPH 1838 2458 2941 3864
TOROK, TAMAS L. 3845
TOUGAS, GERVAIS 2667
TOUGH, DAVID F. 3681
TOURIGNY, GUY 0730 0731
TOUSIGNANT, CHRISTINE 3747
TOYOFUKU, TOSHIHIKO 3117
TRACEY, ALAN S. 1839
TRAHAN, LUC 1840
TRANMER, BRUCE I. 0067
TRASLER, DAPHNE G. 1841 3549
TREHUB, SANDRA E. 1842 3385
TREMBLAY, ANGELO 0190
TREMBLAY, JACQUES P. 1843 1844 2177
TREMBLAY, JOHANNE 0752 1845 1846 2053
TREMBLAY, PATRICK J. 3682
TREMBLAY, ROLAND R. 1847 3387
TREVISAN, MARIA A. (MARYANNE) 3683
TREVITHICK, JOHN R. 1848
TRIFARO, JOSE M. 1849 2116 2320 2998 3108
TRIGATTI, BERNARDO L. 3684
TRIGGLE, CHRISTOPHER R. 0155 0971 1205 1850 3107
TRIGGS-RAINE, BARBARA L. 3118
TRIMBLE, WILLIAM S. 2696
TROPE, GRAHAM E. 0527 0579 1851
TROTTER, MARTIN J. 3119
TROTTIER, YVON 3685
TRUCHON, RENE 0281
TRUDEL, MARIE 1852
TRUDEL, MICHEL 1853
TRUDEL, SUZANNE M. 3686
TRUST, TREVOR J. 1854
TSANG, BENJAMIN K. 1855 2982
TSANG, IAN K.Y. 2338
TSANG, S. SING 1856 2632
TSAO, MING-SOUND 2633
TSOUKAS, CHRISTOS M. 1417
TSUI, C.-H. BAN 3748
TSUI, FLORENCE W.L. 1857
TSUI, JOSEPH K.-C. 2285
TSUI, LAP-CHEE 0217 2500 3056 3713
TUANA, BALWANT S. 1858 3488
TUCHEK, JOHN M. 0887
TUCHWEBER, BEATRIZ 2013
TUCK, ALAN B. 3120
TUFARO, FRANCIS 1859
TUGWELL, PETER 0010 1033
TURCOTTE, BERNARD 2697
TURCOTTE, RAYMOND 1860
TURGEON, JACQUES 0118 2257
TURHAN, ALI G. 3121
TURKSEN, KURSAD 3122 3687
TURLEY, EVA A. 1861 1862
TURNBULL, GEOFFREY K. 1863
TURNER, RAYMOND W. 2698
TUSTANOFF, EUGENE R. 1864
TWEED, DOUGLAS B. 2634 3123
TYBERG, JOHN V. 1865
TYERS, MICHAEL D. 3124
TYLER, JANE L. 2297
TYMIANSKI, MICHAEL 3125
TYML, KAREL 2501 3907
TYNDALE, RACHEL F. 3749
TYNDALL, MARK W. 3126
TYRRELL, DAVID L.J. 1866 2075 2207 2362 2714
TZE, WAH JUN 1867
UETRECHT, JACK P. 1868 1869 2117
UHTHOFF, HANS K. 1870
UITTO, V. VELI-JUKKA 1871 2258
UNDERDOWN, BRIAN J. 1872 2148 2407
UNDERHILL, D. ALAN 3688
VACCARINO, FRANCO J. 3362
VADAS, PETER 2404
VADEBONCOEUR, CHRISTIAN 0753 1873 3380
VALE, WYLIE W. 2686
VALIANTE, TAUFIK A. 3689
VALLI, VICTOR E.O. 0096 0501
VALVANO, MIGUEL A. 1874 1875 2118
VAN AERDE, JOHNY E. 1876
VAN DE LAVOIR, MARIE-CECILE P.G. 3127
VAN DE SANDE, JOHAN H. 1877 2180
VAN DE WERVE, GERALD 1878 2119 2259
VAN DER KOOY, DEREK J. 1879 1880 1881 2502 2704 3248
VAN DER LINDEN, MARTIAL 2684
VAN DER REST, MICHEL 1882 3672
VAN DER ZEE, CATHARINA E.E.M. 3128
VAN LIER, JOHANNES E. 2279 3585
VAN OBBERGHEN, EMMANUEL 2993
VAN RYN-MCKENNA, JOANNE 3690
VAN TOL, HUBERT H.M. 1883 2313
VAN VUGT, DEAN A. 1884 2260
VANCE, DENNIS E. 1885
VANCE, JEAN E. 1886
VANDERHYDEN, BARBARA C. 3129
VANDERMEULEN, JOHN A. 1887
VANIER, LAURENT 3691
VANNER, STEPHEN J. 2699

VANNUCCI, ROBERT C. 3167
VARIN, FRANCE 0147 1888
VARMA, DAYA R. 1889
VARMUS, HAROLD E. 3013
VARMUZA, SUSANNAH L. 1890
VAS, STEPHEN I. 2369
VASDEV, SUDESH C. 0648 1891
VEALE, WARREN L. 1892
VEDERAS, JOHN C. 2102
VEILLETTE, ANDRE 1893 2635
VEKEMANS, MICHEL J.J. 1894 3324
VENANCE, SHANNON L. 3692
VENKATARAMANAN, RAMAN 3865
VERCHERE, C. BRUCE 3693
VERGE, VALERIE M.K. 3130
VERRIER, MARY C. 3367
VEZINA, MANON 1431
VIALLET, JEAN 2414
VIDAL-SANZ, MANUEL 3131
VIELKIND, JUERGEN R. 1895 2636
VIETH, REINHOLD 1896
VIGER, ROBERT S. 3694
VIGH-TEICHMANN, INGEBORG 3823
VILIS, TUTIS 1897 2165 3314 3396
VILLAR, JESUS 3132
VILLENEUVE, JEAN-PIERRE 1888 2298 2299
VINAY, PATRICK 1898 2066 3226 3574
VINCENT, ANGELA 2996
VINCENT, MICHEL 2319
VINCENT, RENAUD 3133
VINCENT, STEVEN R. 1899 2503
VOGEL, HANS J. 1900
VOGEL, LEE B. 3220
VOGL, A. WAYNE 1901
VOLDEN, JOANNE C. 3695
VOLPE, ROBERT 1902 3048 3200
VORALIA, MICHAEL 3696
VRANIC, MLADEN 1903 2952
VRIEZEN, ELLEN R. 3697
WADA, JUHN A. 1904 2459
WADDELL, JAMES P. 2386
WADDELL, THOMAS K. 3134
WAGNER, ERWIN F. 2847
WAGNER, GERHARD 2715
WAGNER, J. RICHARD 3135
WAGNER, JOHN A. 2660
WAINBERG, MARK A. 1905
WAINWRIGHT, SANDRA L. 3698
WAINWRIGHT, STANLEY D. 1906 2460
WAISMAN, DAVID M. 1907 2261 2504
WAITHE, WILLIAM I. 3685
WALDRON, JOHN J. 0974
WALDRON, MARK A. 3699
WALKER, DAVID C. 3136
WALKER, IAN G. 1908
WALKER, JACQUELINE G. 3700
WALKER, JAN A. 3701
WALKER, PAUL M. 1909 3061
WALKER, PETER 1910
WALKER, W. BRUCE 3702
WALL, JACK R. 1911 2733
WALL, KATHARINE M. 3137
WALL, LEE A. 2110
WALLACE, B.A. 3160
WALLACE, JOHN L. 1912 2393 2417 2637
WALLEN, LINDA D. 1913
WALLEY, KEITH R. 1914 2085
WALSH, MICHAEL P. 1915 2505 2731
WALTER, EMILY G. 3703
WALTER, MICHAEL A. 3138
WALTON, DONALD J. 3644
WALTON, PAUL A. 3139
WALZ, WOLFGANG 1916 2506
WANG, CHEN 3140
WANG, CHIAYENG C. 3141
WANG, JERRY H. 1917 1918 2759 3243
WANG, JIAN 3142
WANG, LAWRENCE C.H. 1919
WANG, WEI 3704
WANG, Y.-H. EUGENIA 1920 2507 3490
WANG, YONGCHANG 3743
WANLESS, IAN R. 0790 2369
WARD, MICHAEL A. 3705
WARD, MICHAEL E. 3143
WARING, EDWARD M. 1921
WARNICA, J. WAYNE 2410
WARNOCK, GARTH L. 1922 2780
WARREN, R. ANTONY J. 2418 2842 3194
WARREN, RICHARD A. 3706
WARRINGTON, RICHARD J. 2123
WARSH, JERRY J. 1923 3170
WARSHAWSKY, HERSHEY 1924
WATERS, GLORIA S. 1925 3568 3624
WATKIN, KENNETH L. 3334
WATSON, ANDREW J. 3144
WATSON, MARK H. 3707
WATSON, PETER H. 2668 3145
WATSON, PHILIP A. 2308
WATSON, STANLEY J. 2785
WATT, DOUGLAS G.D. 2337
WATT, VALERIE M. 1926
WATTERS, JAMES M. 1927
WATTS, TANIA H. 1928 2096 2265 3489 3665
WAYE, MARY M.Y. 2283 2344 2370
WAYGOOD, E. BRUCE 1929 3655
WEAVER, LYNNE C. 1930 3429
WEAVER, VALERIE M. 3708
WEBBER, COLIN E. 0065 1931
WEBER, ANDREE M. 2013 2419
WEBER, JEAN-MICHEL 3146
WEBER, JOSEPH 1932 2208
WEECH, PHILIP K. 2404
WEEKS, GERALD 1933 1934
WEGMANN, THOMAS G. 1935 3696
WEINER, JOEL H. 1936 1937
WEINGARTEN, HARVEY P. 0373
WEINGARTNER, HERBERT 3106
WEIR, BRYCE K.A. 1938
WEIR, M. LYNN 3709
WEISEL, RICHARD D. 1939
WEISGRABER, KARL H. 3150
WEISIGER, RICHARD A. 2742
WEISS, DAVID S. 3710
WEISS, PATRICE L. 3233
WEISS, SAMUEL 1940 2638
WEISSMAN, IRVING L. 2918
WEITZ, JEFFREY I. 0812 1941
WELHAM, MELANIE J. 3147
WELLINGTON, CHERYL L. 3148
WELLS, JAMES W. 1942 1943
WELLS, PETER G. 1944 1945
WELNER, SHARON A. 1786
WELSH, JOELLEN 1946 3668 3708
WENMAN, WANDA M. 1947 2207
WEST, KENNETH A. 3149
WEST, NIGEL H. 1948 2262
WESTERFIELD, MONTE 2676
WESTEPLUND, JOHN A.R. 3150
WESTRA, HENNY A. 3711
WETMORE, LISA A. 3712
WEVERS, HENDRIK W. 2202 2321
WEVRICK, RACHEL 3713
WEXLER, MARVIN J. 2345
WEYMAN, ARTHUR E. 3084
WHERRETT, JOHN R. 1949
WHISHAW, IAN Q. 1950
WHITE, BRADLEY N. 0825 3217
WHITE, DONNA R. 3237
WHITE, K. ANDREW 3714
WHITE, NORMAN M. 1951
WHITE, STEPHEN F. 3715
WHITE, THOMAS D. 1625 1952 2093
WHITELAW, WILLIAM A. 1953
WHITESIDE, CATHARINE I. 2282
WHITFIELD, CHRISTOPHER 1954
WHITFIELD, JAMES F. 0604
WHITFIELD, MICHAEL F. 2396
WHITFORD, MARC F. 3221
WIEBE, LEONARD I. 1955 1956 2163 3197
WIEMAN, CORNELIA G. 3716
WIGGS, BARRY J. 0345
WILD, GARY E. 3151
WILDEMAN, ALAN G. 1957
WILEY, MICHAEL J. 1944 3412
WILKINS, JOHN A. 1958 2123 3072

INDEX

WILKINS, PAUL J. 3717
WILKINSON, DAVID A. 3718
WILKINSON, GRANT R. 3866
WILKINSON, MARSHALL F. 3152 3719
WILKINSON, MICHAEL 1959
WILLAN, ANDREW R. 0140
WILLARD, HUNTINGTON F. 3074 3713
WILLEMS, BERNARD 2372
WILLIAMS, BRYAN R.G. 1960 1961 1962 2816
WILLIAMS, C. NOEL 0790 1963
WILLIAMS, DAVID B. 1964 2639 3573
WILLIAMS, H. BRUCE 2420
WILLIAMS, WILLIAM G. 1503
WILLISON, KEITH 2781
WILSON, ALLAN 3372
WILSON, ALLAN C. 2875
WILSON, DOUGLAS R. 1746
WILSON, GREGORY J. 1965
WILSON, IAN A. 2689
WILSON, JEFFREY B. 3153
WILSON, JOHN X. 1966
WILSON, LAURENE J. 3720
WILSON, NADINE 1967
WILSON, PAULA J. 3154
WING, PETER C. 2338
WING, SIMON S. 2669
WINOCOUR, PETER D. 3831
WINOCUR, GORDON 1968
WINTER, DAVID A. 1969 3716
WISE, ROY A. 1970 2863
WISENBERG, GERALD 1453
WISSE, BRENT E. 3721
WITELSON, SANDRA F. 1971
WITHERS, STEPHEN G. 0215
WITTMAN, BERND K. 1594
WITTNICH, CARIN 1972
WOERLY, STEPHANE 3155
WOJTOWICZ, JAN M. 2272
WOLF, HERMANN K. 2310
WOLFE, BERNARD M. 1973
WOLFE, DAVID A. 1974
WOLFE, LEONHARD S. 1975 2182 2183 2297 2461
WOLLENBERG, GORDON K. 3156
WOLLIN, ARMIN 1976 3611
WOLOWYK, MICHAEL W. 0971 2384
WONG, ALAN Y.K. 2310 3352
WONG, CLARA L.F. 3722
WONG, DENNIS A. 3157
WONG, JEFFREY T. 1977 1978
WONG, KENNETH 1979
WONG, M.S. JOHNSON 3723
WONG, MARGARET 3724
WONG, NORMAN C.-W. 1980 1981 2640 3328
WONG, NORMAN L.M. 1982
WONG, PUI-YUEN 0366
WOO, NOBBY D. 3158
WOOD, JACKIE D. 2761
WOOD, JAMES D. 3320
WOOD, JANET M. 1983
WOOD, STEPHEN 1984 3256
WOOD, WILLIAM B. 3024
WOODCROFT, KIMBERLEY J. 3725
WOODRUFF, WENDY A. 3159
WOODS, DONALD E. 1985
WOODSIDE, BARBARA C. 1986
WOOLLEY, G. ANDREW 3160
WOROBEC, ELIZABETH A. 1987
WOROBETZ, LAWRENCE J. 0790
WORTON, RONALD G. 1988 2869
WOULFE, JOHN M. 3726
WRANA, JEFFREY L. 3727
WREGGETT, KEITH A. 2700
WRIGHT, ERNEST M. 3010
WRIGHT, JAMES A. 3094
WRIGHT, JAMES R., JR. 1989
WRIGHT, JOANNE L. 0345 1990 2136
WRIGHT, MATTHEW R. 3728
WRIGHT, WOODRING E. 2833
WROBEL-KONRAD, EDYTA M. 3161
WROGEMANN, KLAUS 3251
WU, DONG-DONG 3206
WU, GILLIAN E. 1991 2096 2641
WU, GUOYAO 3162
WU, QI 3163
WU, TAI-WING 1992
WURTZ, ROBERT H. 2987
WYSE, D. GEORGE 2322
WYSS, URS P. 1345 1993 2321 2399
XANTHOUDAKIS, STEVEN 3164
XIANG, JIAN H. 3165
XIAO, HUA 3166
XIONG, FEI 3729
XU, XIN 3207
YAFFE, MARTIN J. 1994 1995
YAGER, JEROME Y. 3167
YALE, JEAN-FRANCOIS 1996 2071
YAMAGUCHI, NOBUHARU 1997 3556
YAMAMOTO, Y. LUCAS 0467 1998 2297 2421
YANG, DANIEL S.-C. 1999 2042
YARUS, MICHAEL 2767
YATSCOFF, RANDALL W. 2000 3308
YEE, GAYLE M. 3730
YEE, SIU-POK 2701
YELLE, JOCELYN 3168
YEN, EDWIN H.K. 2001 2120 3908
YEO, ERIK L. 2002
YEUNG, IVAN W.T. 3731
YEUNG, MOIRA M. 2003
YEUNG, POLLEN K.F. 2004 3748
YIM, CONRAD C.-Y. 2005
YIP, CECIL C. 0591 2006
YOKOYAMA, SHINJI 2007 3466
YONG, CARL B. 3732
YONG, VOON WEE 2642 2674
YOO, DONGWAN 3169
YOON, JI-WON 2008 2009
YOUNES, MAGDY K. 2010
YOUNG, ALAN J. 373[illegible]
YOUNG, ALLAN 3742
YOUNG, IAIN D. 2011
YOUNG, JAMES D. 1389
YOUNG, L. TREVOR 3170
YOUNG, PAUL G. 2162
YOUNG, RACHEL A. 3734
YOUNG, SIMON N. 0093 0333 2012
YOUNGHUSBAND, H. BANFIELD 1160
YOUSEF, IBRAHIM M. 2013
YU, FRANK H. 3735
YU, PETER H. 2014
YUAN, SONGYANG 3171
YULIS, CARLOS R. 3824
ZACHAREWSKI, TIMOTHY R. 3172
ZACHARKO, ROBERT M. 2015
ZAKAR, TAMAS 3825
ZALIK, SARA E. 2016
ZANKE, BRENT W. 2670
ZANNIS-HADJOPOULOS, MARIA 2017 2508
ZARB, GEORGE A. 2746
ZARZECKI, PETER 2018 2271
ZASTAWNY, ROMAN L. 3736
ZATORRE, ROBERT J. 0905 2019 2297
ZEE, BENNY C.-Y. 1993 2399
ZELINSKI, TERESA A. 1080
ZHANEL, GEORGE G. 3208
ZHANG, LI 3173
ZHANG, LIANG 3174
ZHAO, JIANMIN 3175
ZHENG, YUNLI 3176
ZHOU, MING 3737
ZHU, QINZHANG 3738
ZHU, ZHIREN 2020
ZIDICHOUSKI, JEFFREY A. 3177 3739
ZIGMOND, MICHAEL J. 2947
ZILTENER, HERMANN J. 2886
ZINGG, HANS H. 2021 2063 2643 3493 3619
ZINGG, WALTER 1329 1660
ZINKERNAGEL, ROLF M. 3000
ZIOLA, BARRY R. 2022
ZIPURSKY, ALVIN 0490
ZIS, ATHANASIOS P. 2023
ZOCHODNE, DOUGLAS W. 2024
ZUCKER, STEVEN W. 2025
ZUROFF, DAVID C. 3447 3551 3633

ZWIERS, HINDRIK 2026
ZWIMPFER, THOMAS J. 3178